

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

NETWORK SYSTEM TECHNOLOGIES, LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 2:22-cv-482-RWS
	)	
TEXAS INSTRUMENTS INCORPORATED	)	<b>JURY TRIAL DEMANDED</b>
and FORD MOTOR COMPANY,	)	
	)	
Defendants.	)	
	)	

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**DEFENDANT TEXAS INSTRUMENTS INCORPORATED'S ANSWER AND  
COUNTERCLAIMS TO PLAINTIFF'S FIRST AMENDED COMPLAINT FOR  
PATENT INFRINGEMENT**

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Defendant Texas Instruments Incorporated (“Defendant” or “TI”) submits its answer, defenses, and counterclaims to Plaintiff Network System Technologies, LLC’s (“Plaintiff” or “NST”) First Amended Complaint. The answers herein are based on a reasonable investigation to date. TI reserves the right to amend its answer if it subsequently gains additional information.

TI’s reproduction below of the headings and paragraphs set forth in the Complaint is solely for the purpose of convenience and is not, and should not be construed as, an admission by TI that any allegation or other statements in the headings or the paragraphs of the Complaint, whether explicit or implied, are true, correct, or admitted by TI. All allegations in NST’s Complaint, including those in the headings, that TI does not expressly admit or deny in this Answer are specifically denied by TI.

**NATURE OF THE ACTION**

1. This is a civil action for patent infringement under the patent laws of the United States, Title 35, United States Code, Section 271, *et seq.*, involving the follow United States

Patents (collectively, “Asserted Patents”) and seeking damages and injunctive relief as provided in 35 U.S.C. §§ 281 and 283-285.

U.S. Patent No. 7,366,818 (Exhibit 1, “‘818 patent”) <sup>1</sup>
U.S. Patent No. 7,373,449 (Exhibit 2, “‘449 patent”)
U.S. Patent No. 7,594,052 (Exhibit 3, “‘052 patent”)
U.S. Patent No. 7,769,893 (Exhibit 4, “‘9893 patent”)
U.S. Patent No. 8,072,893 (Exhibit 5, “‘2893 patent”)
U.S. Patent No. 8,086,800 (Exhibit 6, “‘800 patent”)

**TI’s Response:** TI admits that the Complaint purports to be an action for patent infringement arising under Title 35 of the United States Code, involving U.S. Patent Nos. 7,366,818, 7,373,449, 7,594,052, 7,769,893, 8,072,893, and 8,086,800. TI denies all allegations of patent infringement in this District or elsewhere and denies that NST is entitled to any relief.

### THE PARTIES

2. Plaintiff is a limited liability company formed under the laws of Delaware, with a principal place of business at 533 Congress Street, Portland, ME 04101. Plaintiff is the owner by assignment of the Asserted Patents.

**TI’s Response:** TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

3. On information and belief, Texas Instruments Incorporated (“TI”) is a corporation organized and existing under the laws of Delaware, having a principal place of business at 12500 TI Boulevard, Dallas, Texas 75243. On information and belief, TI has business locations in this Judicial District at 6412 U.S. Highway 75, Sherman, Texas 75090; 300 W. Renner Road, Richardson, Texas 75080; and 2501 S. State Highway 121 Bus., Lewisville, Texas 75067.<sup>2</sup>

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<sup>1</sup> NST references and incorporates Exhibits 1-18 attached to NST’s December 19, 2022 Complaint. (Dkt. 1.)

<sup>2</sup> See Defendant Texas Instruments Incorporated’s Answer and Counterclaims to Plaintiff’s Complaint for Patent Infringement, *MIMO Research, LLC v. Texas Instruments Incorporated*, 5:22-cv-00083, Dkt. No. 9 at 3-4 (E.D. Tex.

Further, on information and belief, TI is building new semiconductor wafer fabrication plants in this Judicial District in Sherman, Texas, an investment which could reach \$30 billion and create 3,000 jobs.<sup>3</sup> TI has been served and has answered herein.

**TI's Response:** Admitted.

4. On information and belief, Ford Motor Company (“Ford”) is a corporation organized and existing under the laws of Delaware, having a principal place of business at 1 American Road, Dearborn, Michigan 48126. On information and belief, Ford has a business location in this Judicial District at 5700 Granite Parkway, Suite 1000, Plano, Texas 75024.<sup>4</sup> Ford describes this office as “its Central Market Area Office” and “the principal office of Ford in the State of Texas,” where “the decision makers for [Ford] within this state conduct the daily affairs of the organization.” *Ford Motor Co. v. Johnson*, 473 S.W.3d 925, 927 (Tex. App. 2015). Ford has been served and has answered herein.

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

5. On information and belief, the Defendants are engaged in making, using, offering for sale, selling, importing, or otherwise providing, within the United States and in particular the State of Texas and this Judicial District, directly or indirectly, system-on-a-chip products (“SoCs”) and/or products containing SoCs with features and functionalities that infringe the Asserted Patents.

**TI's Response:** Denied.

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Sept. 6, 2022).

<sup>3</sup> <https://www.ti.com/about-ti/company/ti-at-a-glance/manufacturing/sherman.html> (last visited December 19, 2022); <https://news.ti.com/texas-instruments-breaks-ground-on-new-300-mm-semiconductor-wafer-fabrication-plants-in-sherman-texas> (last visited December 19, 2022).

<sup>4</sup> <https://www.granitepark.com/directory> (last visited December 19, 2022).

## **JURISDICTION AND VENUE**

6. This Court has jurisdiction over the subject matter of this action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

**TI's Response:** TI states that the question of subject matter jurisdiction is a conclusion of law, rather than a statement of fact, to which no response is required. To the extent a response is required, TI does not contest that this Court has original subject matter jurisdiction over patent disputes arising under the patent laws of the United States. TI denies all allegations of patent infringement in this District or elsewhere.

7. Each Defendant is subject to this Court's personal jurisdiction consistent with the principles of due process and the Texas Long Arm Statute. Tex. Civ. Prac. & Rem. Code §§ 17.041, *et seq.*

**TI's Response:** With respect to TI, TI does not contest that this Court has personal jurisdiction. TI denies all allegations of patent infringement in this District or elsewhere.

8. Jurisdiction and venue for this action are proper in this Judicial District.

**TI's Response:** With respect to TI, TI does not contest that jurisdiction and venue are proper in this District. TI denies all allegations of patent infringement in this District or elsewhere.

9. This Court has personal jurisdiction over Defendants at least because, through a respective Defendant's own acts and/or through the acts of each other Defendant acting as its agent, representative, or alter ego, they (i) have a presence or regular and established place of business in the State of Texas and this Judicial District; (ii) have purposefully availed themselves of the rights and benefits of the laws of the State of Texas and this Judicial District; (iii) have done and are doing substantial business in the State of Texas and this Judicial District, directly or through intermediaries, both generally and, on information and belief, with respect to the allegations in this

Complaint, including their one or more acts of infringement in the State of Texas and this Judicial District; (iv) maintain continuous and systematic contacts in the State of Texas and this Judicial District; and/or (v) place products alleged to be infringing in this Complaint in the stream of commerce, directly or through intermediaries, with awareness that those products are likely destined for use, offer for sale, sale, and/or importation in the State of Texas and this Judicial District.

**TI's Response:** Plaintiff's statements about personal jurisdiction reflect conclusions of law, rather than statements of fact, to which no response is required. To the extent a response is required, TI does not contest that this Court has personal jurisdiction. TI denies all allegations of patent infringement in this District or elsewhere.

10. For example, Defendants have authorized retailers and distributors in the State of Texas and this Judicial District for the products alleged to be infringing in this Complaint, and Defendants have derived substantial revenues from their infringing acts occurring within the State of Texas and this Judicial District.

**TI's Response:** TI admits that it offers for sale, and/or sells its products and services in the State of Texas and this District. TI denies all allegations of patent infringement in this District or elsewhere. TI denies any remaining allegations contained in this paragraph.

11. Defendants have established sufficient minimum contacts with the State of Texas and this Judicial District such that they should reasonably and fairly anticipate being brought into court in the State of Texas and this Judicial District without offending traditional notions of fair play and substantial justice; and Defendants have purposefully directed activities at residents of the State of Texas and this Judicial District. Moreover, the patent infringement claims alleged herein arise out of or are related to one or more of the foregoing activities. On information and

belief, a substantial part of the events giving rise to Plaintiff's claims, including acts of patent infringement, have occurred in the State of Texas and this Judicial District.

**TI's Response:** Plaintiff's statements about sufficient minimum contacts reflect conclusions of law, rather than statements of fact, to which no response is required. To the extent a response is required, TI does not contest that this Court has personal jurisdiction. TI denies all allegations of patent infringement in this District or elsewhere. TI denies that any of TI's contacts with Texas, business conducted by TI in Texas or elsewhere, or other activity performed by TI in Texas or elsewhere gives rise to Plaintiff's causes of action for patent infringement. TI denies that any of the activities alleged by Plaintiff constitute patent infringement if performed by TI in Texas or elsewhere. TI denies all remaining allegations contained in this paragraph.

12. Venue is proper in this Judicial District as to Defendants under 28 U.S.C. §§ 1391(b) and (c) and 1400(b).

**TI's Response:** With respect to TI, TI does not contest that venue is proper in this District. TI denies all allegations of patent infringement in this District or elsewhere.

13. Venue is proper as to TI and Ford because, on information and belief, they have committed acts of infringement and each have a regular and established place of business in this Judicial District, as identified above in paragraphs 3 and 4. 28 U.S.C. § 1400(b).

**TI's Response:** The question of a regular and established place of business is a conclusion of law, rather than a statement of fact, to which no response is required. To the extent a response is required, TI does not contest that venue is proper in this District. TI denies all allegations of patent infringement in this District or elsewhere.

## **JOINDER**

14. Joinder is proper under at least Federal Rule of Civil Procedure 20 and 35 U.S.C. § 299 at least because Defendants' infringing conduct alleged herein arises out of the same transaction, occurrence, or series of transactions or occurrences relating to the making, using, importing into the United States, offering for sale, or selling of the same accused product or process, and questions of fact common to all Defendants will arise in this action.

**TI's Response:** The question of joinder is a conclusion of law, rather than a statement of fact, to which no response is required. Moreover, TI is the sole remaining defendant in this case as the Court has severed Plaintiff's claims against Ford. Accordingly, TI denies as moot the allegations in this paragraph and denies all allegations of patent infringement in this District or elsewhere

15. On information and belief, the accused products are either the accused TI SoCs (as in the case of TI) or products containing the accused TI SoCs (as in the case of the remaining Defendants), and thus the TI SoCs are common to all Defendants' infringement of the Asserted Patents. On information and belief, all Defendants infringe the Asserted Patents by, for example, making, using, importing, offering for sale, and selling TI SoCs, whether alone or integrated into other products. Stated differently, on information and belief, each of the Defendants' accused products infringes the same Asserted Patents by using TI SoCs—meaning that all accused products use identically sourced components and that there is overlap of the accused products' and processes' development and manufacture. Thus, on information and belief, common SoC technology is a defining characteristic for each of the Defendant's infringement, and the factual question of infringement will substantially overlap for all Defendants.

**TI's Response:** The question of joinder is a conclusion of law, rather than a statement of fact, to which no response is required. Moreover, TI is the sole remaining defendant in this case

as the Court has severed Plaintiff's claims against Ford. Accordingly, TI denies as moot the allegations in this paragraph and denies all allegations of patent infringement in this District or elsewhere.

16. Further, on information and belief, Ford purchases or otherwise obtains the TI SoCs from TI, and there are licensing or technology agreements between TI and Ford.

**TI's Response:** TI admits that it sells SoCs that are used by Ford. TI lacks sufficient knowledge or information to admit or deny the remaining allegations in this paragraph, e.g., an identification of the agreements referenced in this paragraph, and therefore denies those allegations.

### **THE ASSERTED PATENTS**

17. The Asserted Patents result from extensive research and development by Philips Semiconductors, a subsidiary of Koninklijke Philips N.V. ("Philips") that included VLSI Technology, Inc., which Philips acquired in 1999. Prior to being spun off in 2006 as NXP Semiconductors N.V. ("NXP"), Philips Semiconductors was one of the largest semiconductor companies in the world. Each of the Asserted Patents predate the NXP spin-off and were retained by Philips until all right, title, and interest in the Asserted Patents were transferred to Plaintiff.

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

#### **U.S. Patent No. 7,366,818**

18. Plaintiff is the lawful owner of all right, title, and interest in United States Patent No. 7,366,818 ("818 patent"), entitled "INTEGRATED CIRCUIT COMPRISING A PLURALITY OF PROCESSING MODULES AND A NETWORK AND METHOD FOR EXCHANGING DATA USING SAME," including the right to sue and to recover for infringement

thereof. The '818 patent was duly and legally issued on April 29, 2008, naming Andrei Radulescu and Kees Gerard Willem Goossens as inventors. A copy of the '818 patent was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 1.

**TI's Response:** TI admits that the face of the '818 Patent is titled "Integrated Circuit Comprising A Plurality Of Processing Modules And A Network And Method For Exchanging Data Using Same," lists an issue date of April 29, 2008, lists Andrei Radulescu and Kees Gerard Willem Goossens as inventors and that a copy of what purports to be the '818 Patent is attached as Exhibit 1. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

19. The '818 patent has 7 claims: 1 independent claim and 6 dependent claims.

**TI's Response:** To the extent this paragraph sets forth conclusions of law, no response is required. To the extent a response is required, TI admits.

20. The '818 patent covers SoCs that have an interface that comprises a dropping means for dropping data exchanged by two modules and where the interface can control the dropping of data and therefore completion of message transactions.

**TI's Response:** This paragraph purports to summarize the subject matter or claims of the '818 patent, which speak for themselves. The paragraph therefore presents a conclusion of law to which no response is required. To the extent a response is required, TI lacks sufficient knowledge or information to admit or deny the allegations contained in this paragraph and, therefore, denies them.

21. The claims of the '818 patent, including claim 1 (reproduced below), recite at least these inventive concepts of the '818 patent.

1. Integrated circuit comprising a plurality of processing modules (M, S) said modules being disposed on the same chip, and a network (N; RN) arranged for providing at least one connection between a first and at least one second module

(M, S),

wherein said modules communicate via a network on chip, and

wherein said connection supports transactions comprising outgoing messages from the first module to the second modules and return messages from the second modules to the first module, the integrated circuit comprising at least one dropping means (DM) for dropping data exchanged by said first and second module (M, S), and

at least one interface means (ANIP, PNIP) for managing the interface between a module (M, S) and the network (N, RN),

wherein said interface means (ANIP, PNIP) comprises a first dropping means (DM) for dropping data, and

wherein the dropping of data and therefore the transaction completion can be controlled by the interface means.

(Dkt. 1-1, '818 patent at claim 1.) The subject matter described and claimed by the '818 patent, including the integrated circuit of claim 1, was an improvement in the functionality, performance, and efficiency of integrated circuits and the connections and communication networks thereof and was novel and not well-understood, routine, or conventional at the time of the '818 patent.

**TI's Response:** This paragraph purports to summarize claim 1 of the '818 patent, which speaks for itself, or otherwise sets forth conclusions of law, to which no response is required. To the extent a response is required, TI denies the novelty and non-obviousness of the claimed invention and denies all remaining factual allegations contained in this paragraph.

22. Defendants had knowledge of the '818 patent at least as of the December 19, 2022 filing of NST's Complaint. (Dkt. 1).

**TI's Response:** To the extent this paragraph sets forth conclusions of law, no response is required. To the extent a response is required, TI admits the '818 Patent was listed in the Complaint served in this case. TI denies all remaining allegations contained in this paragraph.

23. The '818 patent was developed and patented by Philips Semiconductors, one of the

largest semiconductor companies in the world. Because of the size and prominence of Philips in the tight-knit semiconductor industry, industry participants, including, on information and belief, Defendants, monitored patenting activity by Philips and reviewed, and were aware of shortly after their publication, at least the U.S. published patent applications and patents obtained by Philips in the semiconductor space, including the '818 patent. On information and belief, such industry participants, including Defendants, considered Philips' U.S. published patent applications and patents in the semiconductor space, including the '818 patent, and such Philips U.S. published patent applications and patents' actual or potential applicability to their own current products and product roadmaps, including the products described herein.

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

24. The '818 patent is widely and publicly known, and frequently referenced, in the tight-knit semiconductor industry, having been cited during prosecution of approximately 76 patent applications assigned to industry leaders such as Intel Corporation, Arm Limited, NEC Corporation, IBM Corporation, and others.<sup>5</sup>

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

25. On information and belief, Defendants sought to make themselves aware of competitors' patents in the semiconductor space as they developed their products and product roadmaps, including the products described herein.

**TI's Response:** TI respects the intellectual property rights of others. TI lacks sufficient knowledge or information to admit or deny the remaining allegations contained in this paragraph

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<sup>5</sup> <https://patents.google.com/patent/US7366818B2/en?oq=7%2c366%2c818> (last visited December 19, 2022).

and therefore denies them.

26. Therefore, on information and belief, Defendants monitored U.S. published patent applications and patents obtained by Philips in the semiconductor space in around the years 2006-2012.

**TI's Response:** Denied.

27. On information and belief, Defendants were aware of and considered the '818 patent, and its actual or potential applicability to their own current products and product roadmaps, including the products described herein.

**TI's Response:** Denied.

28. On information and belief, Defendants have expertise in the subject matter of the '818 patent and possesses sufficient technical competence to understand the scope of such patent.

**TI's Response:** TI admits that it has technical competence and expertise in the design and manufacture of integrated circuits, generally. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

29. By virtue of Philips' and the '818 patent's fame in the semiconductor industry, the patent's inclusion in the Philips Semiconductor portfolio, and Defendants' development of their infringing products and product roadmaps, Defendants had actual knowledge of the '818 patent around the time it issued or its U.S. application published, and in no event later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** The question of "actual knowledge" is a conclusion of law, to which no response is required. TI admits the '818 Patent was listed in the Complaint served in this case. TI denies all allegations of infringement and all remaining allegations contained in this paragraph.

**U.S. Patent No. 7,373,449**

30. Plaintiff is the lawful owner of all right, title, and interest in United States Patent No. 7,373,449 (“449 patent”), entitled “APPARATUS AND METHOD FOR COMMUNICATING IN AN INTEGRATED CIRCUIT,” including the right to sue and to recover for infringement thereof. The ’449 patent was duly and legally issued on May 13, 2008, naming Andrei Radulescu and Kees Gerard Willem Goossens as inventors. A copy of the ’449 patent was attached to NST’s December 19, 2022 Complaint (Dkt. 1) as Exhibit 2.

**TI’s Response:** TI admits that the face of the ’449 Patent is titled “Apparatus And Method For Communicating In An Integrated Circuit,” lists an issue date of May 13, 2008, lists Andrei Radulescu and Kees Gerard Willem Goossens as inventors and that a copy of what purports to be the ’449 Patent is attached as Exhibit 2. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

31. The ’449 patent has 18 claims: 2 independent claims and 16 dependent claims.

**TI’s Response:** To the extent this paragraph sets forth conclusions of law, no response is required. To the extent a response is required, TI admits.

32. The ’449 patent covers SoCs that have a resource manager that manages network resources by determining whether the resources (i.e., communication channels and connection properties) are available.

**TI’s Response:** This paragraph purports to summarize the subject matter or claims of the ’449 patent, which speak for themselves. The paragraph therefore presents a conclusion of law to which no response is required. To the extent a response is required, TI lacks sufficient knowledge or information to admit or deny the allegations contained in this paragraph and, therefore, denies them.

33. The claims of the ’449 patent, including claim 10 (reproduced below), recite at least

these inventive concepts of the '449 patent.

10. Method for exchanging messages in an integrated circuit comprising a plurality of modules, the messages between the modules being exchanged over connections via a network, wherein said connections comprises a set of communication channels each having a set of connection properties, any communication channel being independently configurable, wherein said connection through the network supports transactions comprising at least one of outgoing messages from the first module to the second module and return messages from the second module to the first module and further comprising the steps of:

the first module issuing a request for a connection with the second module to a communication manager, wherein the request comprises desired connection properties associated with the sets of communication channels;

the communication manager forwarding the request to a resource manager;

the resource manager determining whether a target connection with the desired connection properties is available;

the resource manager responding with the availability of the target connection to the communication manager; and

the target connection between the first and second module being established based on the available properties of said communication channels of said connection.

(Dkt. 1-2., '449 patent at claim 10.) The subject matter described and claimed by the '449 patent, including the method for exchanging messages in an integrated circuit of claim 10, was an improvement in the functionality, performance, and efficiency of integrated circuits and the connections and communication networks thereof and was novel and not well-understood, routine, or conventional at the time of the '449 patent.

**TI's Response:** This paragraph purports to summarize claim 10 of the '449 patent, which speaks for itself, or otherwise sets forth conclusions of law, to which no response is required. To the extent a response is required, TI denies the novelty and non-obviousness of the claimed invention and denies all remaining factual allegations contained in this paragraph.

34. Defendants had knowledge of the '449 patent at least as of the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** To the extent this paragraph sets forth conclusions of law, no response is required. To the extent a response is required, TI admits the '449 Patent was listed in the Complaint served in this case. TI denies all remaining allegations contained in this paragraph.

35. The '449 patent was developed and patented by Philips Semiconductors, one of the largest semiconductor companies in the world. Because of the size and prominence of Philips in the tight-knit semiconductor industry, industry participants, including, on information and belief, Defendants, monitored patenting activity by Philips and reviewed, and were aware of shortly after their publication, at least the U.S. published patent applications and patents obtained by Philips in the semiconductor space, including the '449 patent. On information and belief, such industry participants, including Defendants, considered Philips' U.S. published patent applications and patents in the semiconductor space, including the '449 patent, and such Philips U.S. published patent applications and patents' actual or potential applicability to their own current products and product roadmaps, including the products described herein.

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

36. The '449 patent is widely and publicly known, and frequently referenced, in the tight-knit semiconductor industry, having been cited during prosecution of approximately 76 patent applications assigned to industry leaders such as Intel Corporation, Arm Limited, NEC Corporation, IBM Corporation, and others.<sup>6</sup>

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the

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<sup>6</sup> <https://patents.google.com/patent/US7373449B2/en?oq=7%2c373%2c449> (last visited December 19, 2022).

remaining allegations contained in this paragraph and therefore denies them.

37. On information and belief, Defendants sought to make themselves aware of competitors' patents in the semiconductor space as they developed their products and product roadmaps, including the products described herein.

**TI's Response:** TI respects the intellectual property rights of others. TI lacks sufficient knowledge or information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

38. Therefore, on information and belief, Defendants monitored U.S. published patent applications and patents obtained by Philips in the semiconductor space in around the years 2006-2012.

**TI's Response:** Denied.

39. On information and belief, Defendants were aware of and considered the '449 patent, and its actual or potential applicability to their own current products and product roadmaps, including the products described herein.

**TI's Response:** Denied.

40. On information and belief, Defendants have expertise in the subject matter of the '449 patent and possesses sufficient technical competence to understand the scope of such patent.

**TI's Response:** TI admits that it has technical competence and expertise in the design and manufacture of integrated circuits, generally. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

41. By virtue of Philips' and the '449 patent's fame in the semiconductor industry, the patent's inclusion in the Philips Semiconductor portfolio, and Defendants' development of their

infringing products and product roadmaps, Defendants had actual knowledge of the '449 patent around the time it issued or its U.S. application published, and in no event later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** The question of "actual knowledge" is a conclusion of law, to which no response is required. TI admits the '449 Patent was listed in the Complaint served in this case. TI denies all allegations of infringement and all remaining allegations contained in this paragraph.

#### **U.S. Patent No. 7,594,052**

42. Plaintiff is the lawful owner of all right, title, and interest in United States Patent No. 7,594,052 ("'052 patent"), entitled "INTEGRATED CIRCUIT AND METHOD OF COMMUNICATION SERVICE MAPPING," including the right to sue and to recover for infringement thereof. The '052 patent was duly and legally issued on September 22, 2009, naming Andrei Radulescu and Kees Gerard Willem Goossens as inventors. A copy of the '052 patent was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 3.

**TI's Response:** TI admits that the face of the '052 Patent is titled "Integrated Circuit And Method Of Communication Service Mapping," lists an issue date of September 22, 2009, lists Andrei Radulescu and Kees Gerard Willem Goossens as inventors and that a copy of what purports to be the '052 Patent is attached as Exhibit 3. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

43. The '052 patent has 7 claims: 3 independent claims and 4 dependent claims.

**TI's Response:** To the extent this paragraph sets forth conclusions of law, no response is required. To the extent a response is required, TI admits.

44. The '052 patent covers SoCs that offer differentiated intermodular communication services based on connections with corresponding properties. The covered SoCs map a requested

communication service to a connection based on communication and connection properties.

**TI's Response:** This paragraph purports to summarize the subject matter or claims of the '052 patent, which speak for themselves. The paragraph therefore presents a conclusion of law to which no response is required. To the extent a response is required, TI lacks sufficient knowledge or information to admit or deny the allegations contained in this paragraph and, therefore, denies them.

45. The claims of the '052 patent, including claim 6 (reproduced below), recite at least these inventive concepts of the '052 patent.

6. Method of communication service mapping in an integrated circuit, having a plurality of processing modules (M, S), wherein at least one first of said processing modules (M) requests at least one communication service to at least one second processing module (S) based on specific communication properties and at least one communication service identification, wherein said at least one communication service identification comprises at least one communication thread or at least one address range, said address range for identifying one or more second processing modules (S) or a memory region within said one or more second processing modules (S), comprising the steps of:

coupling said plurality of processing modules (M, S) by an interconnect means (N) and

enabling a connection based communication having a set of connection properties, controlling the communication between said at least one first of said plurality of processing modules (M) and said interconnect means (N) by at least one network interface (NI) associated to said at least one first of said processing modules,

mapping the requested at least one communication service based on said specific communication properties to a connection based on a set of connection properties according to said at least one communication service identification.

(Dkt. 1-3, '052 patent at claim 6.) The subject matter described and claimed by the '052 patent, including the method of communication service mapping in an integrated circuit of claim 6, was an improvement in the functionality, performance, and efficiency of integrated circuits and the

connections and communication networks thereof and was novel and not well-understood, routine, or conventional at the time of the '052 patent.

**TI's Response:** This paragraph purports to summarize claim 6 of the '052 patent, which speaks for itself, or otherwise sets forth conclusions of law, to which no response is required. To the extent a response is required, TI denies the novelty and non-obviousness of the claimed invention and denies all remaining factual allegations contained in this paragraph.

46. Defendants had knowledge of the '052 patent at least as of the December 19, 2022 filing of NST's Complaint. (Dkt.1.)

**TI's Response:** To the extent this paragraph sets forth conclusions of law, no response is required. To the extent a response is required, TI admits the '052 Patent was listed in the Complaint served in this case. TI denies all remaining allegations contained in this paragraph.

47. The '052 patent was developed and patented by Philips Semiconductors, one of the largest semiconductor companies in the world. Because of the size and prominence of Philips in the tight-knit semiconductor industry, industry participants, including, on information and belief, Defendants, monitored patenting activity by Philips and reviewed, and were aware of shortly after their publication, at least the U.S. published patent applications and patents obtained by Philips in the semiconductor space, including the '052 patent. On information and belief, such industry participants, including Defendants, considered Philips' U.S. published patent applications and patents in the semiconductor space, including the '052 patent, and such Philips U.S. published patent applications and patents' actual or potential applicability to their own current products and product roadmaps, including the products described herein.

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

48. The '052 patent is widely and publicly known, and frequently referenced, in the tight-knit semiconductor industry, having been cited during prosecution of approximately 19 patent applications assigned to industry leaders such as Samsung Electronics Co. and others.<sup>7</sup>

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

49. On information and belief, Defendants sought to make themselves aware of competitors' patents in the semiconductor space as they developed their products and product roadmaps, including the products described herein.

**TI's Response:** TI respects the intellectual property rights of others. TI lacks sufficient knowledge or information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

50. Therefore, on information and belief, Defendants monitored U.S. published patent applications and patents obtained by Philips in the semiconductor space in around the years 2006-2012.

**TI's Response:** Denied.

51. On information and belief, Defendants were aware of and considered the '052 patent, and its actual or potential applicability to their own current products and product roadmaps, including the products described herein.

**TI's Response:** Denied.

52. On information and belief, Defendants have expertise in the subject matter of the '052 patent and possesses sufficient technical competence to understand the scope of such patent.

**TI's Response:** TI admits that it has technical competence and expertise in the design and

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<sup>7</sup> <https://patents.google.com/patent/US7594052B2/en?oq=7%2c594%2c052> (last visited December 19, 2022).

manufacture of integrated circuits, generally. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

53. By virtue of Philips' and the '052 patent's fame in the semiconductor industry, the patent's inclusion in the Philips Semiconductor portfolio, and Defendants' development of their infringing products and product roadmaps, Defendants had actual knowledge of the '052 patent around the time it issued or its U.S. application published, and in no event later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** The question of "actual knowledge" is a conclusion of law, to which no response is required. TI admits the '052 Patent was listed in the Complaint served in this case. TI denies all allegations of infringement and all remaining allegations contained in this paragraph.

#### **U.S. Patent No. 7,769,893**

54. Plaintiff is the lawful owner of all right, title, and interest in United States Patent No. 7,769,893 ("9893 patent"), entitled "INTEGRATED CIRCUIT AND METHOD FOR ESTABLISHING TRANSACTIONS," including the right to sue and to recover for infringement thereof. The '9893 patent was duly and legally issued on August 3, 2010, naming Kees Gerard Willem Goossens as inventor. A copy of the '9893 patent was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 4.

**TI's Response:** TI admits that the face of the '9893 Patent is titled "Integrated Circuit And Method For Establishing Transactions," lists an issue date of August 3, 2010, lists Kees Gerard Willem Goossens as inventor and that a copy of what purports to be the '9893 Patent is attached as Exhibit 4. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them

55. The '9893 patent has 11 claims: 2 independent claims and 9 dependent claims.

**TI's Response:** To the extent this paragraph sets forth conclusions of law, no response is required. To the extent a response is required, TI admits.

56. The '9893 patent covers SoCs that use an address translation unit, which is part of a network interface, for address mapping, where the address translation unit determines both the location of a message receiving module and a location within the message receiving module.

**TI's Response:** This paragraph purports to summarize the subject matter or claims of the '9893 patent, which speak for themselves. The paragraph therefore presents a conclusion of law to which no response is required. To the extent a response is required, TI lacks sufficient knowledge or information to admit or deny the allegations contained in this paragraph and, therefore, denies them.

57. The claims of the '9893 patent, including claim 4 (reproduced below), recite at least these inventive concepts of the '9893 patent.

4. A method for exchanging messages in an integrated circuit comprising a plurality of modules, the messages between the plurality of modules being exchanged via a network wherein a message issued by an addressing module M comprises:

first information indicative of a location of an addressed message receiving module S within the network and is comprised of (1) a connection identifier identifying two or more message receiving modules S and (2) an identifier of a passive network interface means associated with the addressed message receiving module S, and second information indicative of a particular location within the addressed message receiving module S, such as a memory, or a register address, the method including the steps of:

- (a) issuing from said addressing module M a message request including said first information, said second information, and data and/or connection properties to an address translation unit included as part of an active network interface module associated with said addressing module M,
- (b) arranging, at said address translation unit, the first and the second information comprising said issued message as a single address,
- (c) determining, at said address translation unit, which message receiving

module S is being addressed in said message request issued from said addressing module M based on said single address, and

(d) further determining, at said address translation unit, the particular location within the addressed message receiving module S based on said single address.

(Dkt. 1-4, '9893 patent at claim 4.) The subject matter described and claimed by the '9893 patent, including the method for exchanging messages in an integrated circuit of claim 4, was an improvement in the functionality, performance, and efficiency of integrated circuits and the connections and communication networks thereof and was novel and not well-understood, routine, or conventional at the time of the '9893 patent.

**TI's Response:** This paragraph purports to summarize claim 4 of the '9893 patent, which speaks for itself, or otherwise sets forth conclusions of law, to which no response is required. To the extent a response is required, TI denies the novelty and non-obviousness of the claimed invention and denies all remaining factual allegations contained in this paragraph.

58. Defendants had knowledge of the '9893 patent at least as of the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** To the extent this paragraph sets forth conclusions of law, no response is required. To the extent a response is required, TI admits the '9893 Patent was listed in the Complaint served in this case. TI denies all remaining allegations contained in this paragraph.

59. The '9893 patent was developed and patented by Philips Semiconductors, one of the largest semiconductor companies in the world. Because of the size and prominence of Philips in the tight-knit semiconductor industry, industry participants, including, on information and belief, Defendants, monitored patenting activity by Philips and reviewed, and were aware of shortly after their publication, at least the U.S. published patent applications and patents obtained by Philips in the semiconductor space, including the '9893 patent. On information and belief, such

industry participants, including Defendants, considered Philips' U.S. published patent applications and patents in the semiconductor space, including the '9893 patent, and such Philips U.S. published patent applications and patents' actual or potential applicability to their own current products and product roadmaps, including the products described herein.

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

60. The '9893 patent is widely and publicly known, and frequently referenced, in the tight-knit semiconductor industry, having been cited during prosecution of approximately 76 patent applications assigned to industry leaders such as Intel Corporation, Arm Limited, NEC Corporation, IBM Corporation, and others.<sup>8</sup>

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

61. On information and belief, Defendants sought to make themselves aware of competitors' patents in the semiconductor space as they developed their products and product roadmaps, including the products described herein.

**TI's Response:** TI respects the intellectual property rights of others. TI lacks sufficient knowledge or information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

62. Therefore, on information and belief, Defendants monitored U.S. published patent applications and patents obtained by Philips in the semiconductor space in around the years 2006-2012.

**TI's Response:** Denied.

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<sup>8</sup> <https://patents.google.com/patent/US7769893B2/en?oq=7%2c769%2c893> (last visited December 19, 2022).

63. On information and belief, Defendants were aware of and considered the '9893 patent, and its actual or potential applicability to their own current products and product roadmaps, including the products described herein.

**TI's Response:** Denied.

64. On information and belief, Defendants have expertise in the subject matter of the '9893 patent and possesses sufficient technical competence to understand the scope of such patent.

**TI's Response:** TI admits that it has technical competence and expertise in the design and manufacture of integrated circuits, generally. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph, and therefore denies them.

65. By virtue of Philips' and the '9893 patent's fame in the semiconductor industry, the patent's inclusion in the Philips Semiconductor portfolio, and Defendants' development of their infringing products and product roadmaps, Defendants had actual knowledge of the '9893 patent around the time it issued or its U.S. application published, and in no event later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** The question of "actual knowledge" is a conclusion of law, no response is required. TI admits the '9893 Patent was listed in the Complaint served in this case. TI denies all allegations of infringement and all remaining allegations contained in this paragraph.

#### **U.S. Patent No. 8,072,893**

66. Plaintiff is the lawful owner of all right, title, and interest in United States Patent No. 8,072,893 ("2893 patent"), entitled "INTEGRATED CIRCUIT WITH DATA COMMUNICATION NETWORK AND IC DESIGN METHOD," including the right to sue and to recover for infringement thereof. The '2893 patent was duly and legally issued on December 6, 2011, naming John Dielissen and Edwin Rijpkema as inventors. A copy of the '2893 patent

was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 5.

**TI's Response:** TI admits that the face of the '2893 Patent is titled "Integrated Circuit With Data Communication Network And IC Design Method," lists an issue date of December 6, 2011, lists John Dielissen and Edwin Rijpkema as inventors as inventors and that a copy of what purports to be the '2893 Patent is attached as Exhibit 5. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them

67. The '2893 patent has 12 claims: 5 independent claims and 7 dependent claims.

**TI's Response:** To the extent this paragraph sets forth conclusions of law, no response is required. To the extent a response is required, TI admits.

68. The '2893 patent covers SoCs that improve data communication speed and frequency synchronization between processing units through the use of packetized data (comprising N data elements) and introduction of a delay (of M\*N cycles) on a communication channel for communication synchronization, with such delay correlated to the size (N) of the data packet.

**TI's Response:** This paragraph purports to summarize the subject matter or claims of the '2893 patent, which speak for themselves. The paragraph therefore presents a conclusion of law to which no response is required. To the extent a response is required, TI lacks sufficient knowledge or information to admit or deny the allegations contained in this paragraph and, therefore, denies them.

69. The claims of the '2893 patent, including claims 1 and 10 (reproduced below), recite at least these inventive concepts of the '2893 patent.

1. An integrated circuit comprising:

a plurality of functional blocks; and

a data communication network comprising a plurality of network stations being interconnected via a plurality of communication channels for communicating data packages between the functional blocks, each data package comprising N data elements including a data element comprising routing information for the network stations, N being an integer of at least two, the plurality of network stations comprising a plurality of data routers and a plurality of network interfaces, each of the data routers being coupled to a functional block via a network interface, the data communication network comprising a first network station and a second network station interconnected through a first communication channel, the data communication network further comprising  $M^*N$  data storage elements, M being a positive integer, the data communication introducing a delay of  $M^*N$  cycles on the first communication channel when the data communication network identifies the first communication channel as having a data transfer delay exceeding a predefined delay threshold.

10. A method of designing an integrated circuit comprising a plurality of functional blocks, and a data communication network comprising a plurality of network stations being interconnected via a plurality of communication channels for communicating data packages between the functional blocks, each data package comprising N data elements including a data element comprising routing information for the network stations, N being an integer of at least two, the plurality of network stations comprising a plurality of data routers and a plurality of network interfaces, each of the data routers being coupled to a functional block via a network interface; the method comprising the acts of:

identifying a first communication channel between a first network station and a second network station that has a data transfer delay exceeding a predefined delay threshold; and

in response to the identifying act, inserting  $M^*N$  data storage elements into the data communication network, M being a positive integer, for introducing a delay of  $M^*N$  cycles on the first communication channel.

(Dkt. 1-5, '2893 patent at claims 1 and 10.) The subject matter described and claimed by the '2893 patent, including the integrated circuit of claim 1 and method of designing an integrated circuit of claim 10, was an improvement in the functionality, performance, and efficiency of integrated circuits and the connections and communication networks thereof and was novel and not well-understood, routine, or conventional at the time of the '2893 patent.

**TI's Response:** This paragraph purports to summarize claims 1 and 10 of the '2893 patent,

which speaks for itself, or otherwise sets forth conclusions of law, to which no response is required. To the extent a response is required, TI denies the novelty and non-obviousness of the claimed invention and denies all remaining factual allegations contained in this paragraph.

70. Defendants had knowledge of the '2893 patent at least as of the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** To the extent this paragraph sets forth conclusions of law, no response is required. To the extent a response is required, TI admits the '2893 Patent was listed in the Complaint served in this case. TI denies all remaining allegations contained in this paragraph.

71. The '2893 patent was developed and patented by Philips Semiconductors, one of the largest semiconductor companies in the world. Because of the size and prominence of Philips in the tight-knit semiconductor industry, industry participants, including, on information and belief, Defendants, monitored patenting activity by Philips and reviewed, and were aware of shortly after their publication, at least the U.S. published patent applications and patents obtained by Philips in the semiconductor space, including the '2893 patent. On information and belief, such industry participants, including Defendants, considered Philips' U.S. published patent applications and patents in the semiconductor space, including the '2893 patent, and such Philips U.S. published patent applications and patents' actual or potential applicability to their own current products and product roadmaps, including the products described herein.

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

72. The '2893 patent is widely and publicly known, and frequently referenced, in the tight-knit semiconductor industry, having been cited during prosecution of approximately 13

patent applications assigned to industry leaders such as Intel Corporation and others.<sup>9</sup>

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

73. On information and belief, Defendants sought to make themselves aware of competitors' patents in the semiconductor space as they developed their products and product roadmaps, including the products described herein.

**TI's Response:** TI respects the intellectual property rights of others. TI lacks sufficient knowledge or information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

74. Therefore, on information and belief, Defendants monitored U.S. published patent applications and patents obtained by Philips in the semiconductor space in around the years 2006-2012.

**TI's Response:** Denied.

75. On information and belief, Defendants were aware of and considered the '2893 patent, and its actual or potential applicability to their own current products and product roadmaps, including the products described herein.

**TI's Response:** Denied.

76. On information and belief, Defendants have expertise in the subject matter of the '2893 patent and possesses sufficient technical competence to understand the scope of such patent.

**TI's Response:** TI admits that it has technical competence and expertise in the design and manufacture of integrated circuits, generally. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

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<sup>9</sup> <https://patents.google.com/patent/US8072893B2/en?oq=8%2c072%2c893> (last visited December 19, 2022).

77. By virtue of Philips' and the '2893 patent's fame in the semiconductor industry, the patent's inclusion in the Philips Semiconductor portfolio, and Defendants' development of their infringing products and product roadmaps, Defendants had actual knowledge of the '9893 patent around the time it issued or its U.S. application published, and in no event later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** The question of "actual knowledge" is a conclusion of law, to which no response is required. To the extent a response is required, TI admits the '2893 Patent was listed in the Complaint served in this case. TI denies all allegations of infringement and all remaining allegations contained in this paragraph

**U.S. Patent No. 8,086,800**

78. Plaintiff is the lawful owner of all right, title, and interest in United States Patent No. 8,086,800 ("800 patent"), entitled "INTEGRATED CIRCUIT AND METHOD FOR BUFFERING TO OPTIMIZE BURST LENGTH IN NETWORKS ON CHIPS," including the right to sue and to recover for infringement thereof. The '800 patent was duly and legally issued on December 27, 2011, naming Andrei Radulescu and Kees Gerard Willem Goossens as inventors. A copy of the '800 patent was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 6.

**TI's Response:** TI admits that the face of the '800 Patent is titled "Integrated Circuit Method For Buffering To Optimize Burst Length In Networks On Chips," lists an issue date of December 27, 2011, lists Andrei Radulescu and Kees Gerard Willem Goossens as inventors and that a copy of what purports to be the '800 Patent is attached as Exhibit 6. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them

79. The '800 patent has 21 claims: 4 independent claims and 17 dependent claims.

**TI's Response:** To the extent this paragraph sets forth conclusions of law, no response is required. To the extent a response is required, TI admits.

80. The '800 patent covers SoCs that employ data buffering at requesting (master) and responding (slave) modules and where each module has a network interface with a wrapper that buffers data into optimal amounts for transfer.

**TI's Response:** This paragraph purports to summarize the subject matter or claims of the '800 patent, which speak for themselves. The paragraph therefore presents a conclusion of law to which no response is required. To the extent a response is required, TI lacks sufficient knowledge or information to admit or deny the allegations contained in this paragraph and, therefore, denies them.

81. The claims of the '800 patent, including claim 10 (reproduced below), recite at least these inventive concepts of the '800 patent.

10. A method for buffering data in an integrated circuit having a plurality of processing modules being connected with an interconnect through interface units, wherein a first processing module communicates to a second processing module using transactions, the method comprising the acts of:

configuring the first processing module having a first memory as a master the provides requests;

configuring the second processing module having a second memory as a slave the provides responses to the requests;

connecting the master to a master interface unit of the interface units;

connecting the master interface unit to the interconnect so that the master interface unit is between the master and the interconnect;

connecting the slave to a slave interface unit of the interface units;

connecting the slave interface unit to the interconnect so that the slave interface unit is between the slave and the interconnect;

determining by a master determination unit of the master interface unit a first optimal amount of data to be buffered by a master wrapper of the master interface unit;

determining by a slave determination unit of the slave interface unit a second optimal amount of data to be buffered by a slave wrapper of the slave interface unit;

buffering by the slave wrapper of the slave interface unit data from the slave to be transferred over the interconnect until a first optimal amount of data is buffered;

transferring the buffered data from the slave wrapper to the master wrapper when said first optimal amount of data has been buffered by the slave wrapper;

buffering by the master wrapper of the master interface unit data from the master to be transferred over the interconnect until a second optimal amount of data is buffered by the master wrapper;

transferring the buffered data from the master wrapper to the slave wrapper when said second optimal amount of data has been buffered by the master wrapper,

wherein at least one of the first determination unit and the second determination unit is further configured to determine an optimal moment for sending the data in said first wrapper or said second wrapper according to communication properties of the communication between the master and the slave, wherein the communication properties include ordering of data transport, flow control including when a remote buffer is reserved for a connection, then a data producer will be allowed to send data only when it is guaranteed that space is available for the produced data at the remote buffer, throughput where a lower bound on throughput is guaranteed, latency where an upper bound for latency is guaranteed, lossiness including dropping of data, transmission termination, transaction completion, data correctness, priority, and data delivery.

(Dkt. 1-6, '800 patent at claim 10.) The subject matter described and claimed by the '800 patent, including the method for buffering data in an integrated circuit of claim 10, was an improvement in the functionality, performance, and efficiency of integrated circuits and the connections and communication networks thereof and was novel and not well-understood, routine, or conventional at the time of the '800 patent.

**TI's Response:** This paragraph purports to summarize claim 10 of the '800 patent, which speaks for itself, or otherwise sets forth conclusions of law, to which no response is required. To the extent a response is required, TI denies the novelty and non-obviousness of the claimed invention and denies all remaining factual allegations contained in this paragraph.

82. Defendants had knowledge of the '800 patent at least as of the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** To the extent this paragraph sets forth conclusions of law, no response is required. To the extent a response is required, TI admits the '800 Patent was listed in the Complaint served in this case. TI denies all remaining allegations contained in this paragraph.

83. The '800 patent was developed and patented by Philips Semiconductors, one of the largest semiconductor companies in the world. Because of the size and prominence of Philips in the tight-knit semiconductor industry, industry participants, including, on information and belief, Defendants, monitored patenting activity by Philips and reviewed, and were aware of shortly after their publication, at least the U.S. published patent applications and patents obtained by Philips in the semiconductor space, including the '800 patent. On information and belief, such industry participants, including Defendants, considered Philips' U.S. published patent applications and patents in the semiconductor space, including the '800 patent, and such Philips U.S. published patent applications and patents' actual or potential applicability to their own current products and product roadmaps, including the products described herein.

**TI's Response:** TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

84. On information and belief, Defendants sought to make themselves aware of competitors' patents in the semiconductor space as they developed their products and product

roadmaps, including the products described herein.

**TI's Response:** TI respects the intellectual property rights of others. TI lacks sufficient knowledge or information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

85. Therefore, on information and belief, Defendants monitored U.S. published patent applications and patents obtained by Philips in the semiconductor space in around the years 2006-2012.

**TI's Response:** Denied.

86. On information and belief, Defendants were aware of and considered the '800 patent, and its actual or potential applicability to their own current products and product roadmaps, including the products described herein.

**TI's Response:** Denied.

87. On information and belief, Defendants have expertise in the subject matter of the '800 patent and possesses sufficient technical competence to understand the scope of such patent.

**TI's Response:** TI admits that it has technical competence and expertise in the design and manufacture of integrated circuits, generally. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

88. By virtue of Philips' and the '800 patent's fame in the semiconductor industry, the patent's inclusion in the Philips Semiconductor portfolio, and Defendants' development of their infringing products and product roadmaps, Defendants had actual knowledge of the '800 patent around the time it issued or its U.S. application published, and in no event later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** The question of "actual knowledge" is a conclusion of law, to which no

response is required. TI admits the '800 Patent was listed in the Complaint served in this case. TI denies all allegations of infringement and all remaining allegations contained in this paragraph.

**BACKGROUND OF DEFENDANTS' INFRINGING CONDUCT**

89. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 88 above.

**TI Response:** TI restates and incorporates by reference its answers to the foregoing paragraphs as if fully set forth herein.

90. In light of the Court's September 25, 2023 Order (Dkt. 95 (dismissing NST's pre-suit willfulness and indirect infringement claims, NST's willfulness and indirect infringement claims herein are limited to Defendant's post-suit activities. NST will continue to pursue discovery related to the dismissed claims pursuant to footnote 3 of said Order (*see id.* at 8 n.3) and, if such discovery warrants, later move for leave to amend this First Amended Complaint to replead those dismissed claims.

**TI Response:** TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

91. SoCs are widely used in consumer electronics or computing devices, including smartphones, laptops, tablets, and embedded systems such as vehicle infotainment devices and advanced driver assistance systems. SoCs are complex integrated circuits that may incorporate multiple processors, memory units, and interfaces onto a single chip.

**TI's Response:** Admitted.

92. As SoCs have developed over time, more processing cores and other IP blocks were incorporated into SoCs, resulting in increased intermodular connections and a greater need for intra-SoC communication efficiency. Thus, intra-SoC communication designs have moved from

prior interconnect technologies (e.g., bus or point-to-point designs) to network interconnects, which provide advantages compared to other forms of intra-SoC communication, such as fewer wires, lower routing congestion, and decreased SoC die area, all leading to: smaller devices; increased IP block density, which results in more powerful devices; increased power efficiency, which enables better battery life; decreased thermal load, which leads to longer system life; and improved system performance. Therefore, interconnect efficiency—driven by the pioneering innovations claimed in the Asserted Patents—is now a dominant factor in determining overall SoC system performance, size, and cost.

**TI's Response:** To the extent this paragraph calls for a legal or expert conclusion no response is required. To the extent a response is required, TI admits that SoCs and intra-SoC communication, have as a general matter, become faster and more efficient over time. TI further admits that modern SoCs incorporate a range of sophisticated technologies, including advanced or multiple processing cores and IP blocks. TI further admits that bus interconnect technologies are substitutes to network interconnects, but denies that the latter provides the advantages alleged. TI denies all remaining allegations contained in this paragraph.

93. As discussed above, the Asserted Patents relate to fundamental innovations in SoCs, including how the multitude of processors, memories, and other functional units residing on an SoC are interconnected and communicate with each other.

**TI's Response:** This paragraph purports to summarize the subject matter of the Asserted Patents, which speak for themselves. To the extent a response is required, TI denies.

94. The Defendants are a leading semiconductor company (TI) and a leading automobile company (Ford). On information and belief, TI provides SoCs that are incorporated into Ford's products. On information and belief, TI's SoCs include Arteris interconnect technology and/or a

derivative thereof.<sup>10</sup> Further, on information and belief, Ford provides products that contain TI SoCs including Arteris interconnect technology and/or a derivative thereof.<sup>11</sup> Thus, on information and belief, Defendants make, use, sell, offer for sale, and/or import, or have otherwise made, used, sold, offered for sale, and/or imported, SoCs including Arteris interconnect technology and/or a derivative thereof, and/or products containing such SoCs.

**TI's Response:** Ford has been severed and stayed from this action. TI admits that it is a semiconductor company who supplies SoCs to a broad range of markets including the automotive market. TI admits that it makes and sells various SoCs, some of which are incorporated into Ford's products and some of which include Arteris interconnect technology. TI lacks sufficient knowledge and information to admit or deny the remaining allegations contained in this paragraph and therefore denies them.

95. As set forth in the charts appended hereto, the TI SoCs, including their incorporation of Arteris interconnect technology and/or a derivative thereof, as well as products incorporating the TI SoCs, infringe each of the Asserted Patents.

**TI's Response:** Denied.

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<sup>10</sup> <https://www.arteris.com/customers> (last visited December 19, 2022) (identifying TI as an Arteris customer and stating: "Texas Instruments has used Arteris® IP technology for over a decade. [Arteris] technology is used in the Jacinto 5/6 and TDA2x / TDA3x advanced driver-assistance system (ADAS) and infotainment SoCs, the CC26xx / CC13xx SimpleLink IoT SoCs, and the OMAP 4 / OMAP 5 SoCs."); see also <https://news.thomasnet.com/fullstory/arteris-flexnoc-network-on-chip-technology-designed-into-majority-of-mobile-soocs-20009449> (last visited December 19, 2022) (Arteris FlexNoC was incorporated into over 60% of SoCs deployed in smartphones and tablets).

<sup>11</sup> <https://www.prnewswire.com/news-releases/tis-innovative-automotive-infotainment-platform-enables-ford-to-redefine-the-user-experience-in-fords-sync-3-300016382.html> (last visited December 19, 2022) (stating that "[TI] and Ford Motor Company have collaborated on an infotainment solution" and that Ford's infotainment system "incorporates TI's OMAP™ 5 processor, a member of the 'Jacinto' family of automotive processors"); <https://seekingalpha.com/article/4513926-texas-instruments-automotive-growth-continues> (last visited December 19, 2022) (identifying Ford and Volkswagen as customers of TI's automotive SoCs for infotainment systems, including the Jacinto SoC product family); <https://www.prnewswire.com/news-releases/more-than-150-million-automotive-processors-from-texas-instruments-drive-innovation-in-the-automotive-market-enabling-a-safer-and-more-connected-driving-experience-300382846.html> (last visited December 19, 2022) (stating that TI's "Jacinto" family of processors is powering infotainment systems" for Ford and Volkswagen vehicles).

96. On information and belief, TI's products that infringe the Asserted Patents (collectively, "TI Accused Products") include the following:

<b>TI Accused Products</b>
<ul style="list-style-type: none"> <li>• TI Jacinto processors including, for example, the OMAP, TDA and DRA families of processors</li> <li>• TI SimpleLink processors including, for example, the CC26xx and CC13xx processors</li> <li>• TI integrated circuits containing Arteris interconnect technology and/or a derivative thereof</li> <li>• Phones, tablets, computers, laptops and Chromebooks containing TI processors or other TI integrated circuits containing Arteris interconnect technology and/or a derivative thereof</li> <li>• Vehicles and components thereof containing TI Jacinto processors or other TI integrated circuits containing Arteris interconnect technology and/or a derivative thereof</li> <li>• Virtual Reality, Augmented Reality and wearable products containing TI processors or other TI integrated circuits containing Arteris interconnect technology and/or a derivative thereof</li> <li>• IoT, Audio, Wireless Network and Smart Home products containing SimpleLink processors or other TI integrated circuits containing Arteris interconnect technology and/or a derivative thereof</li> </ul>

**TI's Response:** Denied.

97. The above-listed TI Accused Products are non-limiting. Additional products of TI may infringe the Asserted Patents, and the above-listed TI Accused Products may infringe additional patents.

**TI's Response:** Denied.

98. TI has infringed and continues to infringe the Asserted Patents by making, using, selling, offering to sell, and/or importing, without license or authority, the TI Accused Products as alleged herein, which embody or use the inventions claimed in the Asserted Patents literally or under the doctrine of equivalents.

**TI's Response:** Denied.

99. Comparisons of claims of the Asserted Patents to exemplary products of the TI Accused Products was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 7 ('818 patent), Exhibit 8 ('449 patent), Exhibit 9 ('052 patent), Exhibit 10 ('9893 patent), Exhibit 11 ('2893), and Exhibit 12 ('800 patent), which are incorporated herein by reference.

**TI's Response:** TI admits that Exhibits 7-12 appear to be charts relating to the Asserted Patents. TI denies that the charts accurately describe the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that any exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by any exhibit. TI lacks knowledge or information sufficient to admit or deny any remaining allegations expressed, implied, or incorporated by this paragraph and therefore denies them.

100. TI has induced infringement and continues to induce infringement of the Asserted Patents by actively and knowingly inducing others to make, use, sell, offer to sell, and/or import, without license or authority, the TI Accused Products as alleged herein, which embody or use the inventions claimed in the Asserted Patents literally or under the doctrine of equivalents.

**TI's Response:** Denied.

101. TI markets, advertises, offers for sale, and/or otherwise promotes the TI Accused Products and, on information and belief, does so to actively and knowingly induce, encourage instruct, and aid one or more persons in the United States to make, use, sell, offer to sell and/or import the TI Accused Products. For example, TI, or an entity under TI's direction or control, advertises, offers for sale, and/or otherwise promotes the TI Accused Products on its website.<sup>12</sup>

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<sup>12</sup> See, e.g., <https://www.ti.com/lit/pdf/spry313> (last visited December 19, 2022) (Jacinto 6 marketing white paper); <https://www.ti.com/lit/pdf/spry250> (last visited December 19, 2022) (discussing TDA2x in marketing white paper);

TI, or one or more related entities, further publishes and distributes data sheets, manuals, and guides for the TI Accused Products.<sup>13</sup> Therein, on information and belief, TI describes and touts the use of the subject matter claimed in the Asserted Patents, as described and alleged herein.

**TI's Response:** TI admits that TI offers its products for sale on its website and publishes materials, such as data sheets, manuals, guides, and white papers, on its website. TI denies the remaining allegations of this paragraph.

102. TI has contributorily infringed and continues to contributorily infringe the Asserted Patents by selling or offering to sell TI Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the Asserted Patents and not a staple article or commodity of commerce suitable for substantial non-infringing use.

**TI's Response:** Denied.

103. On information and belief, and as alleged above, TI has known of the existence of the Asserted Patents and their applicability to TI's Accused Products, and its acts of infringement have been willful and in disregard for the Asserted Patents, without any reasonable basis for believing that it had a right to engage in the infringing conduct, at least as of the dates of knowledge of the Asserted Patents alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** Denied.

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<sup>13</sup> See, e.g., [https://www.ti.com/lit/pdf/spruif7c.pdf?ts=1638387986460&ref\\_url=https%253A%252F%252Fw](https://www.ti.com/lit/pdf/spruif7c.pdf?ts=1638387986460&ref_url=https%253A%252F%252Fw) (last visited December 19, 2022) (DRA79x manual discussing DRA794).

<sup>13</sup> See, e.g., [https://www.ti.com/lit/pdf/spruif7c.pdf?ts=1638387986460&ref\\_url=https%253A%252F%252Fw](https://www.ti.com/lit/pdf/spruif7c.pdf?ts=1638387986460&ref_url=https%253A%252F%252Fw) (last visited December 19, 2022) (DRA79x manual discussing DRA794).

104. On information and belief, Ford's products that infringe the Asserted Patents (collectively, "Ford Accused Products") include the following:

Ford Accused Products
<ul style="list-style-type: none"><li>• Ford vehicles and components thereof containing Jacinto processors or other TI integrated circuits, including for example, the Ford SYNC3 infotainment system and Ford Explorer vehicle</li><li>• Lincoln vehicles and components thereof containing Jacinto processors or other TI integrated circuits</li></ul>

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

105. The above-listed Ford Accused Products are non-limiting. Additional products of Ford may infringe the Asserted Patents, and the above-listed Ford Accused Products may infringe additional patents.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

106. On information and belief, the Ford Accused Products include TI SoCs with Arteris interconnect technology and/or a derivative thereof.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the

allegations contained in this paragraph and therefore denies them.

107. Ford has infringed and continues to infringe the Asserted Patents by making, using, selling, offering to sell, and/or importing, without license or authority, the Ford Accused Products as alleged herein, which embody or use the inventions claimed in the Asserted Patents literally or under the doctrine of equivalents.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

108. Comparison of claims of the Asserted Patents to an exemplary product of the Ford Accused Products was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 13 ('818 patent), Exhibit 14 ('449 patent), Exhibit 15 ('052 patent), Exhibit 16 ('9893 patent), Exhibit 17 ('2893) and Exhibit 18 ('800 patent), which are incorporated herein by reference.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, and to the extent exhibits 13-18 resemble exhibits 7-12, TI denies that the charts accurately describe the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that any exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by any exhibit. TI lacks knowledge or information sufficient to admit or deny any remaining allegations expressed, implied, or incorporated by this paragraph and therefore denies them.

109. Ford has induced infringement and continues to induce infringement of the

Asserted Patents by actively and knowingly inducing others to make, use, sell, offer to sell, and/or import, without license or authority, the Ford Accused Products as alleged herein, which embody or use the inventions claimed in the Asserted Patents literally or under the doctrine of equivalents.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

110. Ford markets, advertises, offers for sale, and/or otherwise promotes the Ford Accused Products and, on information and belief, does so to actively and knowingly induce, encourage, instruct, and aid one or more persons in the United States to make, use, sell, offer to sell and/or import the Ford Accused Products. For example, Ford, or an entity under Ford's direction or control, advertises, offers for sale, and/or otherwise promotes the Ford Accused Products on its website.<sup>14</sup> Ford, or one or more related entities, further publishes and distributes data sheets, manuals, and guides for the Ford Accused Products.<sup>15</sup> Therein, on information and belief, Ford describes and touts the use of the subject matter claimed in the Asserted Patents, as described and alleged herein.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the

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<sup>14</sup> See, e.g., <https://www.ford.com/technology/sync/?gnav=footer-aboutford> (last visited December 19, 2022) (advertising the SYNC3 and other SYNC infotainment systems); and <https://www.ford.com/suvs/explorer/pricing-and-incentives/?gnav=vhpnav-io> (last visited December 19, 2022) (Ford Explorer Pricing and Incentives webpage).

<sup>15</sup> See, e.g., <https://www.ford.com/support/how-tos/sync/sync-3/> (last visited December 19, 2022) (providing numerous product support articles for SYNC3); <https://www.ford.com/suvs/explorer/models/explorer/> (last visited December 19, 2022) (Ford Explorer overview and specifications); and [https://www.ford.com/suvs/explorer/features/technology/#pasrk\\_assist](https://www.ford.com/suvs/explorer/features/technology/#pasrk_assist) (last visited December 19, 2022) (Ford Explorer park assist feature overview).

allegations contained in this paragraph and therefore denies them.

111. Ford has contributorily infringed and continues to contributorily infringe the Asserted Patents by selling or offering to sell Ford Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the Asserted Patents and not a staple article or commodity of commerce suitable for substantial non-infringing use.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

112. On information and belief, and as alleged above, Ford has known of the existence of the Asserted Patents and their applicability to Ford's Accused Products, and its acts of infringement have been willful and in disregard for the Asserted Patents, without any reasonable basis for believing that it had a right to engage in the infringing conduct, at least as of the dates of knowledge of the Asserted Patents alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

#### **COUNT I – INFRINGEMENT OF U.S. PATENT NO. 7,366,818**

113. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 112 above.

**TI Response:** TI restates and incorporates by reference its answers to the foregoing

paragraphs as if fully set forth herein.

114. On information and belief, TI has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the TI Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '818 patent in violation of 35 U.S.C. § 271(a), including claim 1. Comparison of claim 1 of the '818 patent to an exemplary product of the TI Accused Products was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 7, which is incorporated herein by reference.

**TI's Response:** TI denies that the exhibit accurately describes the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that the exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by this paragraph or the exhibit. TI denies all remaining allegations expressed, implied, or incorporated by this paragraph.

115. On information and belief, with knowledge of the '818 patent, TI has actively induced and continues to induce the direct infringement of one or more claims of the '818 patent, including claim 1, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the TI Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '818 patent, including claim 1, with the intent to encourage those customers and/or end users to infringe the '818 patent.

**TI's Response:** Denied.

116. By way of example, on information and belief, TI actively induces infringement of the '818 patent by encouraging, instructing, and aiding one or more persons in the United States,

including but not limited to customers and/or end users who test, operate, and use TI's products, including at least the TI Accused Products, to make, use, sell, offer to sell, and/or import TI's products, including at least the TI Accused Products, in a manner that infringes at least one claim of the '818 patent, including claim 1. For example, as described above, TI actively markets, advertises, offers for sale, and/or otherwise promotes the TI Accused Products by publishing and distributing data sheets, manuals, and guides for the TI Accused Products. Therein, on information and belief, TI describes and touts the use of the subject matter claimed in the '818 patent.

**TI's Response:** TI denies that marketing, advertising, offering for sale, or promoting TI's products induces infringement of any Asserted Patent. TI denies that publishing and distributing materials such as data sheets, manuals, and guides for TI's products induces infringement of any Asserted Patent. TI denies all remaining allegations in this paragraph.

117. On information and belief, with knowledge of the '818 patent, TI also contributed to, and continues to contribute to, the infringement of one or more claims of the '818 patent, including claim 1, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the TI Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '818 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the TI Accused Products, which are especially made or especially adapted for use in infringement of the '818 patent when used for their normal and intended purpose. This is also evidenced by, among other things, TI's informational and promotional materials described above, which describe the normal use and intended purpose of the TI Accused Products and demonstrate that the TI Accused Products are especially made or especially adapted for a use that infringes the '818 patent.

**TI's Response:** Denied.

118. On information and belief, as a result of TI's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, TI's products, including the TI Accused Products, in ways that directly infringe one or more claims of the '818 patent, including claim 1. On information and belief, TI had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of TI's products, including the TI Accused Products, at least as of the dates of knowledge of the '818 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** Denied.

119. On information and belief, with knowledge of the '818 patent, TI has willfully, deliberately, and intentionally infringed the '818 patent, at least as of the dates of knowledge of the '818 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1), and continues to willfully, deliberately, and intentionally infringe the '818 patent. On information and belief, TI had actual knowledge of the '818 patent and TI's infringement of the '818 patent at least as of the dates of knowledge of the '818 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1.). On information and belief, after acquiring that knowledge, TI continued to directly and indirectly infringe the '818 patent as set forth above. On information and belief, TI knew or should have known that its conduct amounted to infringement of the '818 patent at least because TI was aware of the '818 patent and TI's infringement of the '818 patent at least as of the dates of knowledge of the '818 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint

(Dkt1. 1.). TI was aware of its infringement by virtue of the '818 patent's fame in the semiconductor industry, TI's expertise in the subject matter of the '818 patent, TI's technical competence to understand the scope of the '818 patent, and TI's intimate familiarity with its Accused Products. Additionally, TI was aware of the '818 patent, and TI's infringement of the '818 patent, at least as of the December 19, 2022 filing of NST's Complaint (Dkt. 1) because Plaintiff notified TI of such.

**TI's Response:** TI admits that the '818 patent was listed in NST's Complaint. TI denies all remaining allegations of this paragraph.

120. On information and belief, TI will continue to infringe the '818 patent unless and until it is enjoined by this Court. TI, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against TI's acts of infringement and, unless TI is enjoined from its infringement of the '818 patent, Plaintiff will continue to suffer irreparable harm.

**TI's Response:** Denied.

121. Plaintiff is entitled to recover from TI damages at least in an amount adequate to compensate for its infringement of the '818 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

**TI's Response:** Denied.

122. On information and belief, Ford has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the Ford Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '818 patent in violation of 35 U.S.C. § 271(a), including claim 1. A comparison of claim 1 of

the '818 patent to an exemplary product of the Ford Accused Products was attached as NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 13, which is incorporated herein by reference.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, and to the extent the exhibit discusses TI products, TI denies that the exhibit accurately describes the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that the exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by the exhibit. TI lacks knowledge or information sufficient to admit or deny any remaining allegations expressed, implied, or incorporated by this paragraph or the exhibit and therefore denies them.

123. On information and belief, with knowledge of the '818 patent, Ford has actively induced and continues to induce the direct infringement of one or more claims of the '818 patent, including claim 1, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the Ford Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '818 patent, including claim 1, with the intent to encourage those customers and/or end users to infringe the '818 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the

allegations contained in this paragraph and therefore denies them.

124. By way of example, on information and belief, Ford actively induces infringement of the '818 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use Ford's products, including at least the Ford Accused Products, to make, use, sell, offer to sell, and/or import Ford's products, including at least the Ford Accused Products, in a manner that infringes at least one claim of the '818 patent, including claim 1. For example, as described above, Ford actively markets, advertises, offers for sale, and/or otherwise promotes the Ford Accused Products by publishing and distributing data sheets, manuals, and guides for the Ford Accused Products. Therein, on information and belief, Ford describes and touts the use of the subject matter claimed in the '818 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

125. On information and belief, with knowledge of the '818 patent, Ford also contributed to, and continues to contribute to, the infringement of one or more claims of the '818 patent, including claim 1, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the Ford Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '818 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the Ford Accused Products, which are especially made or especially adapted for use in infringement of the '818 patent when used for their normal and

intended purpose. This is also evidenced by, among other things, Ford's informational and promotional materials described above, which describe the normal use and intended purpose of the Ford Accused Products and demonstrate that the Ford Accused Products are especially made or especially adapted for a use that infringes the '818 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

126. On information and belief, as a result of Ford's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, Ford's products, including the Ford Accused Products, in ways that directly infringe one or more claims of the '818 patent, including claim 1. On information and belief, Ford had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of Ford's products, including the Ford Accused Products, at least as of the dates of knowledge of the '818 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

127. On information and belief, with knowledge of the '818 patent, Ford has willfully, deliberately, and intentionally infringed the '818 patent, at least as of the dates of knowledge of

the '818 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1), and continues to willfully, deliberately, and intentionally infringe the '818 patent. On information and belief, Ford had actual knowledge of the '818 patent and Ford's infringement of the '818 patent at least as of the dates of knowledge of the '818 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1.). On information and belief, after acquiring that knowledge, Ford continued to directly and indirectly infringe the '818 patent as set forth above. On information and belief, Ford knew or should have known that its conduct amounted to infringement of the '818 patent at least because Ford was aware of the '818 patent and Ford's infringement of the '818 patent at least as of the dates of knowledge of the '818 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1.). Ford was aware of its infringement by virtue of the '818 patent's fame in the semiconductor industry, Ford's expertise in the subject matter of the '818 patent, Ford's technical competence to understand the scope of the '818 patent, and Ford's intimate familiarity with its Accused Products. Additionally, Ford was aware of the '818 patent, and Ford's infringement of the '818 patent, at least as of the December 19, 2022 filing of NST's Complaint (Dkt. 1) because Plaintiff notified Ford of such.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

128. On information and belief, Ford will continue to infringe the '818 patent unless and until it is enjoined by this Court. Ford, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing

Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against Ford's acts of infringement and, unless Ford is enjoined from its infringement of the '818 patent, Plaintiff will continue to suffer irreparable harm.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

129. Plaintiff is entitled to recover from Ford damages at least in an amount adequate to compensate for its infringement of the '818 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

#### **COUNT II – INFRINGEMENT OF U.S. PATENT NO. 7,373,449**

130. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 129 above.

**TI Response:** TI restates and incorporates by reference its answers to the foregoing paragraphs as if fully set forth herein.

131. On information and belief, TI has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the TI Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '449 patent in violation of 35 U.S.C. § 271(a), including claim 10. Comparison of claim 10 of

the '449 patent to an exemplary product of the TI Accused Products was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 8, which is incorporated herein by reference.

**TI's Response:** TI denies that the exhibit accurately describes the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that the exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by this paragraph or the exhibit. TI denies all remaining allegations expressed, implied, or incorporated by this paragraph.

132. On information and belief, with knowledge of the '449 patent, TI has actively induced and continues to induce the direct infringement of one or more claims of the '449 patent, including claim 10, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the TI Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '449 patent, including claim 10, with the intent to encourage those customers and/or end users to infringe the '449 patent.

**TI's Response:** Denied.

133. By way of example, on information and belief, TI actively induces infringement of the '449 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use TI's products, including at least the TI Accused Products, to make, use, sell, offer to sell, and/or import TI's products, including at least the TI Accused Products, in a manner that infringes at least one claim of the '449 patent, including claim 10. For example, as described above, TI actively markets, advertises, offers for sale, and/or otherwise promotes the TI Accused Products by publishing and

distributing data sheets, manuals, and guides for the TI Accused Products. Therein, on information and belief, TI describes and touts the use of the subject matter claimed in the '449 patent.

**TI's Response:** TI denies that marketing, advertising, offering for sale, or promoting TI's products induces infringement of any Asserted Patent. TI denies that publishing and distributing materials such as data sheets, manuals, and guides for TI's products induces infringement of any Asserted Patent. TI denies all remaining allegations in this paragraph.

134. On information and belief, with knowledge of the '449 patent, TI also contributed to, and continues to contribute to, the infringement of one or more claims of the '449 patent, including claim 10, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the TI Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '449 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the TI Accused Products, which are especially made or especially adapted for use in infringement of the '449 patent when used for their normal and intended purpose. This is also evidenced by, among other things, TI's informational and promotional materials described above, which describe the normal use and intended purpose of the TI Accused Products and demonstrate that the TI Accused Products are especially made or especially adapted for a use that infringes the '449 patent.

**TI's Response:** Denied.

135. On information and belief, as a result of TI's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, TI's products, including the TI Accused Products, in ways that directly infringe one or more claims of the '449 patent, including claim 10.

On information and belief, TI had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of TI's products, including the TI Accused Products, at least as of the dates of knowledge of the '449 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** Denied.

136. On information and belief, with knowledge of the '449 patent, TI has willfully, deliberately, and intentionally infringed the '449 patent, at least as of the dates of knowledge of the '449 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1), and continues to willfully, deliberately, and intentionally infringe the '449 patent. On information and belief, TI had actual knowledge of the '449 patent and TI's infringement of the '449 patent at least as of the dates of knowledge of the '449 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1.). On information and belief, after acquiring that knowledge, TI continued to directly and indirectly infringe the '449 patent as set forth above. On information and belief, TI knew or should have known that its conduct amounted to infringement of the '449 patent at least because TI was aware of the '449 patent and TI's infringement of the '449 patent at least as of the dates of knowledge of the '449 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) TI was aware of its infringement by virtue of the '449 patent's fame in the semiconductor industry, TI's expertise in the subject matter of the '449 patent, TI's technical competence to understand the scope of the '449 patent, and TI's intimate familiarity with its Accused Products. Additionally, TI was aware of the '449 patent, and TI's infringement of the '449 patent, at least as of the December 19, 2022 filing of NST's Complaint (Dkt. 1) because Plaintiff notified TI of such.

**TI's Response:** TI admits that the '449 patent was listed in NST's Complaint. TI denies all remaining allegations of this paragraph.

137. On information and belief, TI will continue to infringe the '449 patent unless and until it is enjoined by this Court. TI, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against TI's acts of infringement and, unless TI is enjoined from its infringement of the '449 patent, Plaintiff will continue to suffer irreparable harm.

**TI's Response:** Denied.

138. Plaintiff is entitled to recover from TI damages at least in an amount adequate to compensate for its infringement of the '449 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

**TI's Response:** Denied.

139. On information and belief, Ford has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the Ford Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '449 patent in violation of 35 U.S.C. § 271(a), including claim 10. A comparison of claim 10 of the '449 patent to an exemplary product of the Ford Accused Products was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 14, which is incorporated herein by reference.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, and to the extent the exhibit discusses TI products, TI denies that the exhibit accurately describes the TI Accused Products; denies that any of the TI Accused Products

embodies or operates according to any claim of any Asserted Patent; denies that the exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by the exhibit. TI lacks knowledge or information sufficient to admit or deny any remaining allegations expressed, implied, or incorporated by this paragraph and therefore denies them.

140. On information and belief, with knowledge of the '449 patent, Ford has actively induced and continues to induce the direct infringement of one or more claims of the '449 patent, including claim 10, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the Ford Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '449 patent, including claim 10, with the intent to encourage those customers and/or end users to infringe the '449 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

141. By way of example, on information and belief, Ford actively induces infringement of the '449 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use Ford's products, including at least the Ford Accused Products, to make, use, sell, offer to sell, and/or import Ford's products, including at least the Ford Accused Products, in a manner that infringes at least one claim of the '449 patent, including claim 10. For example, as described above, Ford actively

markets, advertises, offers for sale, and/or otherwise promotes the Ford Accused Products by publishing and distributing data sheets, manuals, and guides for the Ford Accused Products. Therein, on information and belief, Ford describes and touts the use of the subject matter claimed in the '449 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

142. On information and belief, with knowledge of the '449 patent, Ford also contributed to, and continues to contribute to, the infringement of one or more claims of the '449 patent, including claim 10, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the Ford Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '449 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the Ford Accused Products, which are especially made or especially adapted for use in infringement of the '449 patent when used for their normal and intended purpose. This is also evidenced by, among other things, Ford's informational and promotional materials described above, which describe the normal use and intended purpose of the Ford Accused Products and demonstrate that the Ford Accused Products are especially made or especially adapted for a use that infringes the '449 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the

allegations contained in this paragraph and therefore denies them.

143. On information and belief, as a result of Ford's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, Ford's products, including the Ford Accused Products, in ways that directly infringe one or more claims of the '449 patent, including claim 10. On information and belief, Ford had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of Ford's products, including the Ford Accused Products, at least as of the dates of knowledge of the '449 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

144. On information and belief, with knowledge of the '449 patent, Ford has willfully, deliberately, and intentionally infringed the '449 patent, at least as of the dates of knowledge of the '449 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1), and continues to willfully, deliberately, and intentionally infringe the '449 patent. On information and belief, Ford had actual knowledge of the '449 patent and Ford's infringement of the '449 patent at least as of the dates of knowledge of the '449 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1.). On information and belief, after acquiring that knowledge, Ford continued to directly and indirectly infringe the '449 patent as set forth above. On information and belief, Ford knew or should have known that its conduct

amounted to infringement of the '449 patent at least because Ford was aware of the '449 patent and Ford's infringement of the '449 patent at least as of the dates of knowledge of the '449 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) Ford was aware of its infringement by virtue of the '449 patent's fame in the semiconductor industry, Ford's expertise in the subject matter of the '449 patent, Ford's technical competence to understand the scope of the '449 patent, and Ford's intimate familiarity with its Accused Products. Additionally, Ford was aware of the '449 patent, and Ford's infringement of the '449 patent, at least as of the December 19, 2022 filing of NST's Complaint (Dkt. 1) because Plaintiff notified Ford of such.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

145. On information and belief, Ford will continue to infringe the '449 patent unless and until it is enjoined by this Court. Ford, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against Ford's acts of infringement and, unless Ford is enjoined from its infringement of the '449 patent, Plaintiff will continue to suffer irreparable harm.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

146. Plaintiff is entitled to recover from Ford damages at least in an amount adequate to compensate for its infringement of the '449 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

**COUNT III – INFRINGEMENT OF U.S. PATENT NO. 7,594,052**

147. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 146 above.

**TI Response:** TI restates and incorporates by reference its answers to the foregoing paragraphs as if fully set forth herein.

148. On information and belief, TI has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the TI Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '052 patent in violation of 35 U.S.C. § 271(a), including claim 6. Comparison of claim 6 of the '052 patent to an exemplary product of the TI Accused Products was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 9, which is incorporated herein by reference.

**TI's Response:** TI denies that the exhibit accurately describes the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that the exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by this paragraph or the exhibit. TI denies all remaining allegations expressed, implied, or incorporated by this paragraph.

149. On information and belief, with knowledge of the '052 patent, TI has actively induced and continues to induce the direct infringement of one or more claims of the '052 patent, including claim 6, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the TI Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '052 patent, including claim 6, with the intent to encourage those customers and/or end users to infringe the '052 patent.

**TI's Response:** Denied.

150. By way of example, on information and belief, TI actively induces infringement of the '052 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use TI's products, including at least the TI Accused Products, to make, use, sell, offer to sell, and/or import TI's products, including at least the TI Accused Products, in a manner that infringes at least one claim of the '052 patent, including claim 6. For example, as described above, TI actively markets, advertises, offers for sale, and/or otherwise promotes the TI Accused Products by publishing and distributing data sheets, manuals, and guides for the TI Accused Products. Therein, on information and belief, TI describes and touts the use of the subject matter claimed in the '052 patent.

**TI's Response:** TI denies that marketing, advertising, offering for sale, or promoting TI's products induces infringement of any Asserted Patent. TI denies that publishing and distributing materials such as data sheets, manuals, and guides for TI's products induces infringement of any Asserted Patent. TI denies all remaining allegations in this paragraph.

151. On information and belief, with knowledge of the '052 patent, TI also contributed

to, and continues to contribute to, the infringement of one or more claims of the '052 patent, including claim 6, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the TI Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '052 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the TI Accused Products, which are especially made or especially adapted for use in infringement of the '052 patent when used for their normal and intended purpose. This is also evidenced by, among other things, TI's informational and promotional materials described above, which describe the normal use and intended purpose of the TI Accused Products and demonstrate that the TI Accused Products are especially made or especially adapted for a use that infringes the '052 patent.

**TI's Response:** Denied.

152. On information and belief, as a result of TI's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, TI's products, including the TI Accused Products, in ways that directly infringe one or more claims of the '052 patent, including claim 6. On information and belief, TI had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of TI's products, including the TI Accused Products, at least as of the dates of knowledge of the '052 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** Denied.

153. On information and belief, with knowledge of the '052 patent, TI has willfully,

deliberately, and intentionally infringed the '052 patent, at least as of the dates of knowledge of the '052 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1), and continues to willfully, deliberately, and intentionally infringe the '052 patent. On information and belief, TI had actual knowledge of the '052 patent and TI's infringement of the '052 patent at least as of the dates of knowledge of the '052 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1.). On information and belief, after acquiring that knowledge, TI continued to directly and indirectly infringe the '052 patent as set forth above. On information and belief, TI knew or should have known that its conduct amounted to infringement of the '052 patent at least because TI was aware of the '052 patent and TI's infringement of the '052 patent at least as of the dates of knowledge of the '052 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1.). TI was aware of its infringement by virtue of the '052 patent's fame in the semiconductor industry, TI's expertise in the subject matter of the '052 patent, TI's technical competence to understand the scope of the '052 patent, and TI's intimate familiarity with its Accused Products. Additionally, TI was aware of the '052 patent, and TI's infringement of the '052 patent, at least as of the December 19, 2022 filing of NST's Complaint (Dkt. 1) because Plaintiff notified TI of such.

**TI's Response:** TI admits that the '052 patent was listed in NST's Complaint. TI denies all remaining allegations of this paragraph.

154. On information and belief, TI will continue to infringe the '052 patent unless and until it is enjoined by this Court. TI, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against TI's acts of infringement and, unless TI is enjoined from its infringement of the '052 patent, Plaintiff will

continue to suffer irreparable harm.

**TI's Response:** Denied.

155. Plaintiff is entitled to recover from TI damages at least in an amount adequate to compensate for its infringement of the '052 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

**TI's Response:** Denied.

156. On information and belief, Ford has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the Ford Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '052 patent in violation of 35 U.S.C. § 271(a), including claim 6. A comparison of claim 6 of the '052 patent to an exemplary product of the Ford Accused Products was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 15, which is incorporated herein by reference.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, and to the extent the exhibit discusses TI products, TI denies that the exhibit accurately describes the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that the exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by the exhibit. TI lacks knowledge or information sufficient to admit or deny any remaining allegations expressed, implied, or incorporated by this paragraph and therefore denies them.

157. On information and belief, with knowledge of the '052 patent, Ford has actively induced and continues to induce the direct infringement of one or more claims of the '052 patent,

including claim 6, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the Ford Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '052 patent, including claim 6, with the intent to encourage those customers and/or end users to infringe the '052 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

158. By way of example, on information and belief, Ford actively induces infringement of the '052 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use Ford's products, including at least the Ford Accused Products, to make, use, sell, offer to sell, and/or import Ford's products, including at least the Ford Accused Products, in a manner that infringes at least one claim of the '052 patent, including claim 6. For example, as described above, Ford actively markets, advertises, offers for sale, and/or otherwise promotes the Ford Accused Products by publishing and distributing data sheets, manuals, and guides for the Ford Accused Products. Therein, on information and belief, Ford describes and touts the use of the subject matter claimed in the '052 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the

allegations contained in this paragraph and therefore denies them.

159. On information and belief, with knowledge of the '052 patent, Ford also contributed to, and continues to contribute to, the infringement of one or more claims of the '052 patent, including claim 6, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the Ford Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '052 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the Ford Accused Products, which are especially made or especially adapted for use in infringement of the '052 patent when used for their normal and intended purpose. This is also evidenced by, among other things, Ford's informational and promotional materials described above, which describe the normal use and intended purpose of the Ford Accused Products and demonstrate that the Ford Accused Products are especially made or especially adapted for a use that infringes the '052 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

160. On information and belief, as a result of Ford's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, Ford's products, including the Ford Accused Products, in ways that directly infringe one or more claims of the '052 patent, including claim 6. On information and belief, Ford had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of

Ford's products, including the Ford Accused Products, at least as of the dates of knowledge of the '052 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

161. On information and belief, with knowledge of the '052 patent, Ford has willfully, deliberately, and intentionally infringed the '052 patent, at least as of the dates of knowledge of the '052 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1), and continues to willfully, deliberately, and intentionally infringe the '052 patent. On information and belief, Ford had actual knowledge of the '052 patent and Ford's infringement of the '052 patent at least as of the dates of knowledge of the '052 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) On information and belief, after acquiring that knowledge, Ford continued to directly and indirectly infringe the '052 patent as set forth above. On information and belief, Ford knew or should have known that its conduct amounted to infringement of the '052 patent at least because Ford was aware of the '052 patent and Ford's infringement of the '052 patent at least as of the dates of knowledge of the '052 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) Ford was aware of its infringement by virtue of the '052 patent's fame in the semiconductor industry, Ford's expertise in the subject matter of the '052 patent, Ford's technical competence to understand the scope of the '052 patent, and Ford's intimate familiarity with its Accused Products. Additionally, Ford was aware of the '052 patent, and Ford's infringement of the '052 patent, at

least as of the December 19, 2022 filing of NST's Complaint (Dkt. 1) because Plaintiff notified Ford of such.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

162. On information and belief, Ford will continue to infringe the '052 patent unless and until it is enjoined by this Court. Ford, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against Ford's acts of infringement and, unless Ford is enjoined from its infringement of the '052 patent, Plaintiff will continue to suffer irreparable harm.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

163. Plaintiff is entitled to recover from Ford damages at least in an amount adequate to compensate for its infringement of the '052 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

**COUNT IV – INFRINGEMENT OF U.S. PATENT NO. 7,769,893**

164. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 163 above.

**TI Response:** TI restates and incorporates by reference its answers to the foregoing paragraphs as if fully set forth herein.

165. On information and belief, TI has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the TI Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '9893 patent in violation of 35 U.S.C. § 271(a), including claim 4. Comparison of claim 4 of the '9893 patent to an exemplary product of the TI Accused Products was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 10, which is incorporated herein by reference.

**TI's Response:** TI denies that the exhibit accurately describes the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that the exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by this paragraph or the exhibit. TI denies all remaining allegations expressed, implied, or incorporated by this paragraph.

166. On information and belief, with knowledge of the '9893 patent, TI has actively induced and continues to induce the direct infringement of one or more claims of the '9893 patent, including claim 4, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the TI Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '9893 patent, including claim 4, with the intent to encourage those customers and/or end users to infringe

the '9893 patent.

**TI's Response:** Denied.

167. By way of example, on information and belief, TI actively induces infringement of the '9893 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use TI's products, including at least the TI Accused Products, to make, use, sell, offer to sell, and/or import TI's products, including at least the TI Accused Products, in a manner that infringes at least one claim of the '9893 patent, including claim 4. For example, as described above, TI actively markets, advertises, offers for sale, and/or otherwise promotes the TI Accused Products by publishing and distributing data sheets, manuals, and guides for the TI Accused Products. Therein, on information and belief, TI describes and touts the use of the subject matter claimed in the '9893 patent.

**TI's Response:** TI denies that marketing, advertising, offering for sale, or promoting TI's products induces infringement of any Asserted Patent. TI denies that publishing and distributing materials such as data sheets, manuals, and guides for TI's products induces infringement of any Asserted Patent. TI denies all remaining allegations in this paragraph.

168. On information and belief, with knowledge of the '9893 patent, TI also contributed to, and continues to contribute to, the infringement of one or more claims of the '9893 patent, including claim 4, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the TI Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '9893 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the TI Accused Products, which are especially made or especially adapted for use in infringement of the '9893 patent when used for their normal and

intended purpose. This is also evidenced by, among other things, TI's informational and promotional materials described above, which describe the normal use and intended purpose of the TI Accused Products and demonstrate that the TI Accused Products are especially made or especially adapted for a use that infringes the '9893 patent.

**TI's Response:** Denied.

169. On information and belief, as a result of TI's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, TI's products, including the TI Accused Products, in ways that directly infringe one or more claims of the '9893 patent, including claim 4. On information and belief, TI had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of TI's products, including the TI Accused Products, at least as of the dates of knowledge of the '9893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** Denied.

170. On information and belief, with knowledge of the '9893 patent, TI has willfully, deliberately, and intentionally infringed the '9893 patent, at least as of the dates of knowledge of the '9893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1), and continues to willfully, deliberately, and intentionally infringe the '9893 patent. On information and belief, TI had actual knowledge of the '9893 patent and TI's infringement of the '9893 patent at least as of the dates of knowledge of the '9893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) On information and belief, after acquiring that knowledge, TI continued to directly and indirectly

infringe the '9893 patent as set forth above. On information and belief, TI knew or should have known that its conduct amounted to infringement of the '9893 patent at least because TI was aware of the '9893 patent and TI's infringement of the '9893 patent at least as of the dates of knowledge of the '9893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) TI was aware of its infringement by virtue of the '9893 patent's fame in the semiconductor industry, TI's expertise in the subject matter of the '9893 patent, TI's technical competence to understand the scope of the '9893 patent, and TI's intimate familiarity with its Accused Products. Additionally, TI was aware of the '9893 patent, and TI's infringement of the '9893 patent, at least as of the December 19, 2022 filing of NST's Complaint (Dkt. 1) because Plaintiff notified TI of such.

**TI's Response:** TI admits that the '9893 patent was listed in NST's Complaint. TI denies all remaining allegations of this paragraph.

171. On information and belief, TI will continue to infringe the '9893 patent unless and until it is enjoined by this Court. TI, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against TI's acts of infringement and, unless TI is enjoined from its infringement of the '9893 patent, Plaintiff will continue to suffer irreparable harm.

**TI's Response:** Denied.

172. Plaintiff is entitled to recover from TI damages at least in an amount adequate to compensate for its infringement of the '9893 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

**TI's Response:** Denied.

173. On information and belief, Ford has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the Ford Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '9893 patent in violation of 35 U.S.C. § 271(a), including claim 4. A comparison of claim 4 of the '9893 patent to an exemplary product of the Ford Accused Products was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 16, which is incorporated herein by reference.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, and to the extent the exhibit discusses TI products, TI denies that the exhibit accurately describes the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that the exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by the exhibit. TI lacks knowledge or information sufficient to admit or deny any remaining allegations expressed, implied, or incorporated by this paragraph and therefore denies them.

174. On information and belief, with knowledge of the '9893 patent, Ford has actively induced and continues to induce the direct infringement of one or more claims of the '9893 patent, including claim 4, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the Ford Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '9893 patent, including claim 4, with the intent to encourage those customers and/or end users to infringe the '9893 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

175. By way of example, on information and belief, Ford actively induces infringement of the '9893 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use Ford's products, including at least the Ford Accused Products, to make, use, sell, offer to sell, and/or import Ford's products, including at least the Ford Accused Products, in a manner that infringes at least one claim of the '9893 patent, including claim 4. For example, as described above, Ford actively markets, advertises, offers for sale, and/or otherwise promotes the Ford Accused Products by publishing and distributing data sheets, manuals, and guides for the Ford Accused Products. Therein, on information and belief, Ford describes and touts the use of the subject matter claimed in the '9893 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

176. On information and belief, with knowledge of the '9893 patent, Ford also contributed to, and continues to contribute to, the infringement of one or more claims of the '9893 patent, including claim 4, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the Ford Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '9893 patent and not a staple article or commodity of

commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the Ford Accused Products, which are especially made or especially adapted for use in infringement of the '9893 patent when used for their normal and intended purpose. This is also evidenced by, among other things, Ford's informational and promotional materials described above, which describe the normal use and intended purpose of the Ford Accused Products and demonstrate that the Ford Accused Products are especially made or especially adapted for a use that infringes the '9893 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

177. On information and belief, as a result of Ford's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, Ford's products, including the Ford Accused Products, in ways that directly infringe one or more claims of the '9893 patent, including claim 4. On information and belief, Ford had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of Ford's products, including the Ford Accused Products, at least as of the dates of knowledge of the '9893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint.  
(Dkt. 1.)

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the

allegations contained in this paragraph and therefore denies them.

178. On information and belief, with knowledge of the '9893 patent, Ford has willfully, deliberately, and intentionally infringed the '9893 patent, at least as of the dates of knowledge of the '9893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1), and continues to willfully, deliberately, and intentionally infringe the '9893 patent. On information and belief, Ford had actual knowledge of the '9893 patent and Ford's infringement of the '9893 patent at least as of the dates of knowledge of the '9893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) On information and belief, after acquiring that knowledge, Ford continued to directly and indirectly infringe the '9893 patent as set forth above. On information and belief, Ford knew or should have known that its conduct amounted to infringement of the '9893 patent at least because Ford was aware of the '9893 patent and Ford's infringement of the '9893 patent at least as of the dates of knowledge of the '9893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) Ford was aware of its infringement by virtue of the '9893 patent's fame in the semiconductor industry, Ford's expertise in the subject matter of the '9893 patent, Ford's technical competence to understand the scope of the '9893 patent, and Ford's intimate familiarity with its Accused Products. Additionally, Ford was aware of the '9893 patent, and Ford's infringement of the '9893 patent, at least as of the December 19, 2022 filing of NST's Complaint (Dkt. 1) because Plaintiff notified Ford of such.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

179. On information and belief, Ford will continue to infringe the '9893 patent unless and until it is enjoined by this Court. Ford, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against Ford's acts of infringement and, unless Ford is enjoined from its infringement of the '9893 patent, Plaintiff will continue to suffer irreparable harm.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

180. Plaintiff is entitled to recover from Ford damages at least in an amount adequate to compensate for its infringement of the '9893 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

#### **COUNT V – INFRINGEMENT OF U.S. PATENT NO. 8,072,893**

181. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 180 above.

**TI Response:** TI restates and incorporates by reference its answers to the foregoing paragraphs as if fully set forth herein

182. On information and belief, TI has made, used, offered for sale, sold, and/or

imported products, including within this Judicial District, including at least the TI Accused Products, made or designed by processes that infringe, either literally or under the doctrine of equivalents, one or more claims of the '2893 patent in violation of 35 U.S.C. § 271(a) and/or § 271(g), including claim 10. Comparison of claim 10 of the '2893 patent to an exemplary product of the TI Accused Products made or designed by infringing processes was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 11, which is incorporated herein by reference.

**TI's Response:** TI denies that the exhibit accurately describes the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that the exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by this paragraph or the exhibit. TI denies all remaining allegations expressed, implied, or incorporated by this paragraph.

183. On information and belief, with knowledge of the '2893 patent, TI has actively induced and continues to induce the direct infringement of one or more claims of the '2893 patent, including claim 10, in violation of 35 U.S.C. § 271(b), by its suppliers, customers, and/or end users of its products, including at least the TI Accused Products, by selling, designing, providing support for, providing designs and/or specifications for, providing instructions for use of, and/or otherwise encouraging its suppliers, customers, and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '2893 patent, including claim 10, with the intent to encourage those customers and/or end users to infringe the '2893 patent.

**TI's Response:** Denied.

184. By way of example, on information and belief, TI actively induces infringement of the '2893 patent by encouraging, instructing, and aiding one or more persons in the United

States, including but not limited to suppliers who supply and/or design components (for example, semiconductor IPs) of, test, operate, and/or use TI's products, including at least the TI Accused Products or components thereof (for example, semiconductor IPs), to make, use, sell, offer to sell, and/or import TI's products, including at least the TI Accused Products or components thereof (for example, semiconductor IPs), in a manner that infringes at least one claim of the '2893 patent, including claim 10. For example, as described above, TI actively markets, advertises, offers for sale, and/or otherwise promotes the TI Accused Products by publishing and distributing data sheets, manuals, and guides for the TI Accused Products. Additionally, on information and belief, TI provides its suppliers with specifications and/or designs for components, including by way of example, semiconductor IPs, for the TI Accused Products. Therein, TI describes, encourages, and touts the use of the subject matter claimed in the '2893 patent.

**TI's Response:** TI denies that marketing, advertising, offering for sale, or promoting TI's products induces infringement of any Asserted Patent. TI denies that publishing and distributing materials such as data sheets, manuals, and guides for TI's products induces infringement of any Asserted Patent. TI denies all remaining allegations in this paragraph.

185. On information and belief, with knowledge of the '2893 patent, TI also contributed to, and continues to contribute to, the infringement of one or more claims of the '2893 patent, including claim 10, in violation of 35 U.S.C. § 271(c), by providing specifications and/or designs for the TI Accused Products or components thereof (for example, semiconductor IPs), knowing them to be especially made or especially adapted for practicing the inventions of the '2893 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the specifications and/or designs for TI Accused Products or components thereof (for example,

semiconductor IPs), which are especially made or especially adapted for use in infringement of the '2893 patent when used for their normal and intended purpose. This is also evidenced by, among other things, the normal use and intended purpose of the specifications and/or designs for the TI Accused Products or components thereof (for example, semiconductor IPs), which demonstrate that the specifications and/or designs for the TI Accused Products or components thereof (for example, semiconductor IPs) are especially made or especially adapted for a use that infringes the '2893 patent.

**TI's Response:** Denied.

186. On information and belief, as a result of TI's inducement of, and/or contribution to, infringement, its suppliers, customers, and/or end users designed, made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, TI's products or components thereof (for example, semiconductor IPs), including the TI Accused Products, in ways that directly infringe one or more claims of the '2893 patent, including claim 10. On information and belief, TI had actual knowledge of its suppliers', customers', and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of TI's products, including the TI Accused Products or components thereof (for example, semiconductor IPs), at least as of the dates of knowledge of the '2893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** Denied.

187. On information and belief, with knowledge of the '2893 patent, TI has willfully, deliberately, and intentionally infringed the '2893 patent, at least as of the dates of knowledge of the '2893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1), and continues to willfully, deliberately, and intentionally infringe the '2893

patent. On information and belief, TI had actual knowledge of the '2893 patent and TI's infringement of the '2893 patent at least as of the dates of knowledge of the '2893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) On information and belief, after acquiring that knowledge, TI continued to directly and indirectly infringe the '2893 patent as set forth above. On information and belief, TI knew or should have known that its conduct amounted to infringement of the '2893 patent at least because TI was aware of the '2893 patent and TI's infringement of the '2893 patent at least as of the dates of knowledge of the '2893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) TI was aware of its infringement by virtue of the '2893 patent's fame in the semiconductor industry, TI's expertise in the subject matter of the '2893 patent, TI's technical competence to understand the scope of the '2893 patent, and TI's intimate familiarity with its Accused Products. Additionally, TI was aware of the '2893 patent, and TI's infringement of the '2893 patent, at least as of the December 19, 2022 filing of NST's Complaint (Dkt. 1) because Plaintiff notified TI of such.

**TI's Response:** TI admits that the '2893 patent was listed in NST's Complaint. TI denies all remaining allegations of this paragraph.

188. On information and belief, TI will continue to infringe the '2893 patent unless and until it is enjoined by this Court. TI, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against TI's acts of infringement and, unless TI is enjoined from its infringement of the '2893 patent, Plaintiff will continue to suffer irreparable harm.

**TI's Response:** Denied.

189. Plaintiff is entitled to recover from TI damages at least in an amount adequate to compensate for its infringement of the '2893 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

**TI's Response:** Denied.

190. On information and belief, Ford has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the Ford Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '2893 patent in violation of 35 U.S.C. § 271(a), including claim 1. A comparison of claim 1 of the '2893 patent to an exemplary product of the Ford Accused Products was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 17, which is incorporated herein by reference.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, and to the extent the exhibit discusses TI products, TI denies that the exhibit accurately describes the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that the exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by the exhibit. TI lacks knowledge or information sufficient to admit or deny any remaining allegations expressed, implied, or incorporated by this paragraph and therefore denies them.

191. On information and belief, with knowledge of the '2893 patent, Ford has actively induced and continues to induce the direct infringement of one or more claims of the '2893 patent, including claim 1, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the Ford Accused Products, by selling, providing support for,

providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '2893 patent, including claim 1, with the intent to encourage those customers and/or end users to infringe the '2893 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

192. By way of example, on information and belief, Ford actively induces infringement of the '2893 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use Ford's products, including at least the Ford Accused Products, to make, use, sell, offer to sell, and/or import Ford's products, including at least the Ford Accused Products, in a manner that infringes at least one claim of the '2893 patent, including claim 1. For example, as described above, Ford actively markets, advertises, offers for sale, and/or otherwise promotes the Ford Accused Products by publishing and distributing data sheets, manuals, and guides for the Ford Accused Products. Therein, on information and belief, Ford describes and touts the use of the subject matter claimed in the '2893 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

193. On information and belief, with knowledge of the '2893 patent, Ford also

contributed to, and continues to contribute to, the infringement of one or more claims of the '2893 patent, including claim 1, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the Ford Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '2893 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the Ford Accused Products, which are especially made or especially adapted for use in infringement of the '2893 patent when used for their normal and intended purpose. This is also evidenced by, among other things, Ford's informational and promotional materials described above, which describe the normal use and intended purpose of the Ford Accused Products and demonstrate that the Ford Accused Products are especially made or especially adapted for a use that infringes the '2893 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

194. On information and belief, as a result of Ford's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, Ford's products, including the Ford Accused Products, in ways that directly infringe one or more claims of the '2893 patent, including claim 1. On information and belief, Ford had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of Ford's products, including the Ford Accused Products, at least as of the dates of knowledge of the '2893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint.

(Dkt. 1.)

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

195. On information and belief, with knowledge of the '2893 patent, Ford has willfully, deliberately, and intentionally infringed the '2893 patent, at least as of the dates of knowledge of the '2893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1), and continues to willfully, deliberately, and intentionally infringe the '2893 patent. On information and belief, Ford had actual knowledge of the '2893 patent and Ford's infringement of the '2893 patent at least as of the dates of knowledge of the '2893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) On information and belief, after acquiring that knowledge, Ford continued to directly and indirectly infringe the '2893 patent as set forth above. On information and belief, Ford knew or should have known that its conduct amounted to infringement of the '2893 patent at least because Ford was aware of the '2893 patent and Ford's infringement of the '2893 patent at least as of the dates of knowledge of the '2893 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) Ford was aware of its infringement by virtue of the '2893 patent's fame in the semiconductor industry, Ford's expertise in the subject matter of the '2893 patent, Ford's technical competence to understand the scope of the '2893 patent, and Ford's intimate familiarity with its Accused Products. Additionally, Ford was aware of the '2893 patent, and Ford's infringement of the '2893 patent, at least as of the December 19, 2022 filing of NST's Complaint (Dkt. 1) because Plaintiff notified Ford of such.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

196. On information and belief, Ford will continue to infringe the '2893 patent unless and until it is enjoined by this Court. Ford, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against Ford's acts of infringement and, unless Ford is enjoined from its infringement of the '2893 patent, Plaintiff will continue to suffer irreparable harm.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

197. Plaintiff is entitled to recover from Ford damages at least in an amount adequate to compensate for its infringement of the '2893 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

#### **COUNT VI – INFRINGEMENT OF U.S. PATENT NO. 8,086,800**

198. Plaintiff incorporates by reference the allegations contained in paragraphs 1 to 197

above.

**TI Response:** TI restates and incorporates by reference its answers to the foregoing paragraphs as if fully set forth herein.

199. On information and belief, TI has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the TI Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of the '800 patent in violation of 35 U.S.C. § 271(a), including claim 10. Comparison of claim 10 of the '800 patent to an exemplary product of the TI Accused Products was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 12, which is incorporated herein by reference.

**TI's Response:** TI denies that the exhibit accurately describes the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that the exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by this paragraph or the exhibit. TI denies all remaining allegations expressed, implied, or incorporated by this paragraph.

200. On information and belief, with knowledge of the '800 patent, TI has actively induced and continues to induce the direct infringement of one or more claims of the '800 patent, including claim 10, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the TI Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '800 patent, including claim 10, with the intent to encourage those customers and/or end users to infringe the '800 patent.

**TI's Response:** Denied.

201. By way of example, on information and belief, TI actively induces infringement of the '800 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use TI's products, including at least the TI Accused Products, to make, use, sell, offer to sell, and/or import TI's products, including at least the TI Accused Products, in a manner that infringes at least one claim of the '800 patent, including claim 10. For example, as described above, TI actively markets, advertises, offers for sale, and/or otherwise promotes the TI Accused Products by publishing and distributing data sheets, manuals, and guides for the TI Accused Products. Therein, on information and belief, TI describes and touts the use of the subject matter claimed in the '800 patent.

**TI's Response:** TI denies that marketing, advertising, offering for sale, or promoting TI's products induces infringement of any Asserted Patent. TI denies that publishing and distributing materials such as data sheets, manuals, and guides for TI's products induces infringement of any Asserted Patent. TI denies all remaining allegations in this paragraph.

202. On information and belief, with knowledge of the '800 patent, TI also contributed to, and continues to contribute to, the infringement of one or more claims of the '800 patent, including claim 10, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the TI Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '800 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the TI Accused Products, which are especially made or especially adapted for use in infringement of the '800 patent when used for their normal and intended purpose. This is also evidenced by, among other things, TI's informational and promotional materials described above, which describe the normal use and intended purpose of

the TI Accused Products and demonstrate that the TI Accused Products are especially made or especially adapted for a use that infringes the '800 patent.

**TI's Response:** Denied.

203. On information and belief, as a result of TI's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, TI's products, including the TI Accused Products, in ways that directly infringe one or more claims of the '800 patent, including claim 10. On information and belief, TI had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of TI's products, including the TI Accused Products, at least as of the dates of knowledge of the '800 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.)

**TI's Response:** Denied.

204. On information and belief, with knowledge of the '800 patent, TI has willfully, deliberately, and intentionally infringed the '800 patent, at least as of the dates of knowledge of the '800 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1), and continues to willfully, deliberately, and intentionally infringe the '800 patent. On information and belief, TI had actual knowledge of the '800 patent and TI's infringement of the '800 patent at least as of the dates of knowledge of the '800 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) On information and belief, after acquiring that knowledge, TI continued to directly and indirectly infringe the '800 patent as set forth above. On information and belief, TI knew or should have known that its conduct amounted to infringement of the '800 patent at least because TI was aware of the '800 patent and TI's

infringement of the '800 patent at least as of the dates of knowledge of the '800 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) TI was aware of its infringement by virtue of the '800 patent's fame in the semiconductor industry, TI's expertise in the subject matter of the '800 patent, TI's technical competence to understand the scope of the '800 patent, and TI's intimate familiarity with its Accused Products. Additionally, TI was aware of the '800 patent, and TI's infringement of the '800 patent, at least as of the December 19, 2022 filing of NST's Complaint (Dkt. 1) because Plaintiff notified TI of such.

**TI's Response:** TI admits that the '800 patent was listed in NST's Complaint. TI denies all remaining allegations of this paragraph.

205. On information and belief, TI will continue to infringe the '800 patent unless and until it is enjoined by this Court. TI, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against TI's acts of infringement and, unless TI is enjoined from its infringement of the '800 patent, Plaintiff will continue to suffer irreparable harm.

**TI's Response:** Denied.

206. Plaintiff is entitled to recover from TI damages at least in an amount adequate to compensate for its infringement of the '800 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

**TI's Response:** Denied.

207. On information and belief, Ford has made, used, offered for sale, sold, and/or imported products, including within this Judicial District, including at least the Ford Accused Products, that infringe, either literally or under the doctrine of equivalents, one or more claims of

the '800 patent in violation of 35 U.S.C. § 271(a), including claim 10. A comparison of claim 10 of the '800 patent to an exemplary product of the Ford Accused Products was attached to NST's December 19, 2022 Complaint (Dkt. 1) as Exhibit 18, which is incorporated herein by reference.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, and to the extent the exhibit discusses TI products, TI denies that the exhibit accurately describes the TI Accused Products; denies that any of the TI Accused Products embodies or operates according to any claim of any Asserted Patent; denies that the exhibit demonstrates infringement of any Asserted Patent; and denies all allegations of patent infringement expressed or implied by the exhibit. TI lacks knowledge or information sufficient to admit or deny any remaining allegations expressed, implied, or incorporated by this paragraph and therefore denies them.

208. On information and belief, with knowledge of the '800 patent, Ford has actively induced and continues to induce the direct infringement of one or more claims of the '800 patent, including claim 10, in violation of 35 U.S.C. § 271(b), by its customers and/or end users of its products, including at least the Ford Accused Products, by selling, providing support for, providing instructions for use of, and/or otherwise encouraging its customers and/or end-users to directly infringe, either literally and/or under the doctrine of equivalents, one or more claims of the '800 patent, including claim 10, with the intent to encourage those customers and/or end users to infringe the '800 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the

allegations contained in this paragraph and therefore denies them.

209. By way of example, on information and belief, Ford actively induces infringement of the '800 patent by encouraging, instructing, and aiding one or more persons in the United States, including but not limited to customers and/or end users who test, operate, and use Ford's products, including at least the Ford Accused Products, to make, use, sell, offer to sell, and/or import Ford's products, including at least the Ford Accused Products, in a manner that infringes at least one claim of the '800 patent, including claim 10. For example, as described above, Ford actively markets, advertises, offers for sale, and/or otherwise promotes the Ford Accused Products by publishing and distributing data sheets, manuals, and guides for the Ford Accused Products. Therein, on information and belief, Ford describes and touts the use of the subject matter claimed in the '800 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

210. On information and belief, with knowledge of the '800 patent, Ford also contributed to, and continues to contribute to, the infringement of one or more claims of the '800 patent, including claim 10, in violation of 35 U.S.C. § 271(c), by offering to sell, selling, and/or importing the Ford Accused Products, knowing them to be especially made or especially adapted for practicing the inventions of the '800 patent and not a staple article or commodity of commerce suitable for substantial non-infringing use. This is evidenced by, among other things, the design, configuration, and functionality of the Ford Accused Products, which are especially made or especially adapted for use in infringement of the '800 patent when used for their normal and

intended purpose. This is also evidenced by, among other things, Ford's informational and promotional materials described above, which describe the normal use and intended purpose of the Ford Accused Products and demonstrate that the Ford Accused Products are especially made or especially adapted for a use that infringes the '800 patent.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

211. On information and belief, as a result of Ford's inducement of, and/or contribution to, infringement, its customers and/or end users made, used, sold, offered for sale, or imported, and continue to make, use, sell, offer to sell, or import, Ford's products, including the Ford Accused Products, in ways that directly infringe one or more claims of the '800 patent, including claim 10. On information and belief, Ford had actual knowledge of its customers' and/or end users' direct infringement at least by virtue of their sales, instruction, and/or otherwise promotion of Ford's products, including the Ford Accused Products, at least as of the dates of knowledge of the '800 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint.

(Dkt 1.)

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

212. On information and belief, with knowledge of the '800 patent, Ford has willfully, deliberately, and intentionally infringed the '800 patent, at least as of the dates of knowledge of

the '800 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint (Dkt. 1), and continues to willfully, deliberately, and intentionally infringe the '800 patent. On information and belief, Ford had actual knowledge of the '800 patent and Ford's infringement of the '800 patent at least as of the dates of knowledge of the '800 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) On information and belief, after acquiring that knowledge, Ford continued to directly and indirectly infringe the '800 patent as set forth above. On information and belief, Ford knew or should have known that its conduct amounted to infringement of the '800 patent at least because Ford was aware of the '800 patent and Ford's infringement of the '800 patent at least as of the dates of knowledge of the '800 patent alleged above, and no later than the December 19, 2022 filing of NST's Complaint. (Dkt. 1.) Ford was aware of its infringement by virtue of the '800 patent's fame in the semiconductor industry, Ford's expertise in the subject matter of the '800 patent, Ford's technical competence to understand the scope of the '800 patent, and Ford's intimate familiarity with its Accused Products. Additionally, Ford was aware of the '800 patent, and Ford's infringement of the '800 patent, at least as of the December 19, 2022 filing of NST Complaint (Dkt. 1) because Plaintiff notified Ford of such.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

213. On information and belief, Ford will continue to infringe the '800 patent unless and until it is enjoined by this Court. Ford, by way of its infringing activities, has caused and continues to cause Plaintiff to suffer damages in an amount to be determined, and has caused and

is causing Plaintiff irreparable harm. Plaintiff has no adequate remedy at law against Ford's acts of infringement and, unless Ford is enjoined from its infringement of the '800 patent, Plaintiff will continue to suffer irreparable harm.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

214. Plaintiff is entitled to recover from Ford damages at least in an amount adequate to compensate for its infringement of the '800 patent, which amount has yet to be determined, together with interest and costs fixed by the Court.

**TI's Response:** The allegations in this paragraph are not directed to TI, and therefore no answer is required. Furthermore, Ford has been severed and stayed from this action. To the extent a response is required, TI lacks sufficient knowledge and information to admit or deny the allegations contained in this paragraph and therefore denies them.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiff Network System Technologies, LLC requests that the Court enter judgment for Plaintiff and against Defendants TI and Ford and enter the following relief:

- A. A judgment that Defendants infringe the following Asserted Patents:

U.S. Patent No. 7,366,818 (Exhibit 1, "'818 patent")
U.S. Patent No. 7,373,449 (Exhibit 2, "'449 patent")
U.S. Patent No. 7,594,052 (Exhibit 3, "'052 patent")
U.S. Patent No. 7,769,893 (Exhibit 4, "'9893 patent")
U.S. Patent No. 8,072,893 (Exhibit 5, "'2893 patent")
U.S. Patent No. 8,086,800 (Exhibit 6, "'800 patent")

- B. A preliminary and permanent injunction restraining and enjoining Defendants,

their officers, partners, agents, servants, employees, parents, subsidiaries, divisions, affiliate corporations, joint ventures, other related business entities and all other persons acting in concert, participation, or in privity with them, and their successors and assigns, from infringing the Asserted Patents;

C. An award of damages to Plaintiff arising from Defendants' past and continuing infringement up until the date Defendants are finally and permanently enjoined from further infringement, including compensatory damages;

D. A determination that Defendants' infringement of the Asserted Patents has been willful, and an award of treble damages to Plaintiff pursuant to 35 U.S.C. § 284;

E. A determination that this is an exceptional case and awarding Plaintiff's attorneys' fees pursuant to 35 U.S.C. § 285;

F. An order awarding Plaintiff costs and expenses in this action;

G. An order awarding Plaintiff pre- and post-judgment interest on its damages; and

H. Such other and further relief in law or in equity as this Court deems just and proper.

**TI's Response:** No response to the Prayer for Relief is necessary. To the extent a response is required, TI denies that NST is entitled to any of the requested relief against TI.

#### **JURY DEMAND**

Plaintiff respectfully requests a jury trial on all issues so triable.

**TI's Response:** No response to the Demand for Jury Trial is necessary.

#### **DEFENSES**

TI asserts the following defenses to NST's claims without admitting or acknowledging that it bears the burden of proof as to any of the defenses asserted. TI reserves the right to amend its Answer to add additional defenses.

**FIRST DEFENSE: NON-INFRINGEMENT**

TI does not infringe and has never infringed any valid and enforceable claim of the '818 Patent, the '449 Patent, the '052 Patent, the '9893 Patent, the '2893 Patent, or the '800 Patent ("Asserted Patents"), under any theory—directly, indirectly, jointly with any other person or entity, by inducement, contributorily, literally, under the doctrine of equivalents, or otherwise under any section of 35 U.S.C. § 271—and as such, is without any liability to NST.

**SECOND DEFENSE: INVALIDITY**

Each of the claims of the Asserted Patents is invalid for failure to comply with the requirements of the patent laws of the United States, including provisions of 35 U.S.C. §§ 101, 102, 103, and/or 112.

**THIRD DEFENSE: LIMITATION ON DAMAGES**

Any recovery of damages by NST is limited in whole or in part by 35 U.S.C. §§ 252, 286, 287, and/or 288.

**FOURTH DEFENSE: LIMITATION FOR SALES COVERED BY 28 U.S.C. § 1498(A)**

NST's remedies are limited under 28 U.S.C. § 1498(a) for the TI accused products or services that are provided, made, or used by or for the government of the United States of America.

**FIFTH DEFENSE: LICENSE**

NST's claims for patent infringement are precluded in whole or in part: (i) to the extent that any TI accused products are imported by, sold by or to, offered for sale by, made by, made for, or otherwise supplied (directly or indirectly) by or to any entity or entities having express or implied licenses to the Asserted Patents; (ii) under the doctrine of patent exhaustion; and/or (iii) any doctrine precluding double recovery for claims of infringement attributable to the same device.

**RESERVATION OF RIGHT TO ASSERT ADDITIONAL DEFENSES**

TI has not knowingly or intentionally waived any applicable defenses, and it reserves the right to assert and rely upon other applicable defenses that may become available or apparent throughout the course of this action. TI reserves the right to amend, or seek to amend, its answer, including its affirmative and other defenses.

### **COUNTERCLAIMS**

Pursuant to Federal Rule of Civil Procedure 13, Texas Instruments Incorporated (“TI”) counterclaims against Network System Technologies, LLC (“NST”) and, in support thereof, alleges the following:

### **PARTIES**

1. Counterclaim-Plaintiff TI is a Delaware corporation with a principal place of business at 12500 TI Boulevard, Dallas, TX 75243.
2. Upon information and belief, Counterclaim-Defendant NST is a limited liability company organized and existing under the laws of Texas, having its principal place of business at 533 Congress Street, Portland, ME 04101.

### **JURISDICTION AND VENUE**

3. This is an action for declaratory judgment of invalidity of the ’818 Patent, the ’449 Patent, the ’052 Patent, the ’9893 Patent, the ’2893 Patent, or the ’800 Patent (“Asserted Patents”). This Court has subject matter jurisdiction over this claim pursuant to 28 U.S.C. §§ 1331, 1338(a), 2201, and 2202.

4. Venue is proper in the Eastern District of Texas, under 28 U.S.C. §§ 1391 and 1400, as a result of NST having filed this action in this District. By filing its Complaint in this District, NST has consented to personal jurisdiction and venue.

## **BACKGROUND**

5. On December 19, 2022, NST filed suit against TI, claiming infringement of the '818 Patent, the '449 Patent, the '052 Patent, the '9893 Patent, the '2893 Patent, or the '800 Patent ("Asserted Patents").

6. In its Complaint, NST alleges it is the owner of all substantial rights in the Asserted Patents, including the right to sue, and recover for past and future damages. Compl. (ECF No. 1) ¶¶ 20, 32, 44, 56, 68, 80.

7. An actual, substantial, and justiciable controversy, within the meaning of 28 U.S.C. §§ 2201 and 2202, exists between NST and TI concerning the non-infringement and invalidity of the Asserted Patents. This controversy is of sufficient immediacy and reality to warrant the issuance of a declaratory judgment.

## **COUNT ONE**

### **(Declaratory Judgment of Patent Invalidity of the '818 Patent)**

8. TI incorporates paragraphs 1–7 of its Counterclaims as if fully set forth herein.

9. The claims of the '818 Patent are invalid for failure to comply with one or more requirements of patentability, including requirements under 35 U.S.C. §§ 101, 102, 103, and/or 112.

10. TI is entitled to a declaratory judgment that the claims of the '818 Patent are invalid.

## **COUNT TWO**

### **(Declaratory Judgment of Patent Invalidity of the '449 Patent)**

11. TI incorporates paragraphs 1–7 of its Counterclaims as if fully set forth herein.

12. The claims of the '449 Patent are invalid for failure to comply with one or more requirements of patentability, including requirements under 35 U.S.C. §§ 101, 102, 103, and/or

112.

13. TI is entitled to a declaratory judgment that the claims of the '449 Patent are invalid.

**COUNT THREE**

**(Declaratory Judgment of Patent Invalidity of the '052 Patent)**

14. TI incorporates paragraphs 1–7 of its Counterclaims as if fully set forth herein.
15. The claims of the '052 Patent are invalid for failure to comply with one or more requirements of patentability, including requirements under 35 U.S.C. §§ 101, 102, 103, and/or 112.

16. TI is entitled to a declaratory judgment that the claims of the '052 Patent are invalid.

**COUNT FOUR**

**(Declaratory Judgment of Patent Invalidity of the '9893 Patent)**

17. TI incorporates paragraphs 1–7 of its Counterclaims as if fully set forth herein.
18. The claims of the '9893 Patent are invalid for failure to comply with one or more requirements of patentability, including requirements under 35 U.S.C. §§ 101, 102, 103, and/or 112.
19. TI is entitled to a declaratory judgment that the claims of the '9893 Patent are invalid.

**COUNT FIVE**

**(Declaratory Judgment of Patent Invalidity of the '2893 Patent)**

20. TI incorporates paragraphs 1–7 of its Counterclaims as if fully set forth herein.
21. The claims of the '2893 Patent are invalid for failure to comply with one or more requirements of patentability, including requirements under 35 U.S.C. §§ 101, 102, 103, and/or 112.

22. TI is entitled to a declaratory judgment that the claims of the '2893 Patent are invalid.

**COUNT SIX**

**(Declaratory Judgment of Patent Invalidity of the '800 Patent)**

23. TI incorporates paragraphs 1–7 of its Counterclaims as if fully set forth herein.

24. The claims of the '800 Patent are invalid for failure to comply with one or more requirements of patentability, including requirements under 35 U.S.C. §§ 101, 102, 103, and/or 112.

25. TI is entitled to a declaratory judgment that the claims of the '800 Patent are invalid.

**DEMAND FOR JURY TRIAL**

TI demands a jury trial on all issues that may be so tried.

**PRAYER FOR RELIEF**

For these reasons, TI respectfully requests that this Court enter judgment in its favor and grant the following relief:

a. Enter judgment that TI does not and has not infringed any valid and enforceable claim of the '818 Patent, the '449 Patent, the '052 Patent, the '9893 Patent, the '2893 Patent, or the '800 Patent under any theory—directly, indirectly, jointly with any other person or entity, by inducement, contributorily, literally, under the doctrine of equivalents, or otherwise under any section of 35 U.S.C. § 271;

b. Enter judgment and a declaration that the claims of the '818 Patent, the '449 Patent, the '052 Patent, the '9893 Patent, the '2893 Patent, or the '800 Patent are invalid and unenforceable;

c. Deny each request for relief made by NST;

- d. Enter an order declaring that this is an exceptional case and award TI its costs, expenses, and reasonable attorney fees under 35 U.S.C. § 285 and all other applicable statutes, rules, and common law;
- e. Dismiss NST's Complaint against TI with prejudice; and,
- f. Any such other relief as the Court may deem appropriate and just under the circumstances.

DATED: October 24, 2023

Respectfully submitted,

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**ATTORNEYS FOR DEFENDANT TEXAS  
INSTRUMENTS INCORPORATED**

**CERTIFICATE OF SERVICE**

This is to certify that all counsel of record who are deemed to have consented to electronic service are being served with a copy of the foregoing document via the Court's CM/ECF system per Local Rule CV-5(a)(3) on this 24<sup>th</sup> day of October, 2023.

Amanda A. Abraham

Amanda A. Abraham